Environmental Protection Agency
All Applicant Data Report

Announcement Number: CIN-ZX-ODH-2022-0017

Position Title: Life Scientist/General Engineer/Physical Scientist

Staging Area Number: SA-EPA-0001

Name:

MIDX: 002508472

United States Citizen: Y Veterans' Preference: NV

Military Service Dates (Start of Service - End of Service):

Location(s) Applied to: Anchorage, AK(US); Lacey, WA(US); Seattle, WA(US)

Series Applied To: 0801

Resume

Country of Citizenship: United States

Highest Grade: 12

Availability: Job Type: Permanent

Multiple Appointment Types

Telework

Work Schedule: Full-time

Work Experience: Intel Corporation

05/2022 - Present 2501 NE Century Blvd

Salary: \$111,858.00 USD Per Year

Hillsboro, OR 97124 US Hours per week: 40

### Industrial Engineer

Tool Install Schedule Engineer for Intel's Logic Technology Development (LTD) Equipment Planning and Coordination Team (EPCoT). Defining installation, conversion, and de-install timelines for thousands of semiconductor equipment plans. Coordinating across several groups and organizations to ensure project plans are achieved including LTD management, LTD process engineering, FCE construction, GSC supply chain, and finance. Collaborating with numerous install support teams and organizations to ensure success to develop and improve business and data systems processes. Tracking schedule status and resolving timing delays and issues. Leveling project resources to enable success while meeting needs. Drive overall project plans as part of the project leadership team.

Washington Department of Fish and Wildlife

05/2022 - Present 600 Capitol Way N

Salary: \$78,406.00 USD Per Year

Olympia, WA 98501 US Hours per week: 40

Supervisor: Mike Polodna (360-359-5656)

# Environmental Protection Agency All Applicant Data Report Name:

Okay to contact this Supervisor: Contact me first

Environmental Engineer 2

Environmental Engineer for the Capital and Asset Management Program (CAMP) providing engineering and project management services to create and maintain facilities and natural habitat for the State of Washington. Tasks include researching and writing scopes of work, maintaining budgets, preparing meeting project schedules, securing local, state, and federal permits, overseeing contractor work and contracts, reviewing and approving engineering plans, specifications, drawings and reports, and managing adherence to environmental permit and regulatory standards.

Bureau of Reclamation 09/2021 - Present

P.O. Box 620

Salary: \$93,565.00 USD Per Year

Grand Coulee, WA 99133 US

Hours per week: 40

Series: 0810 Pay Plan: GS Grade: 12

Supervisor: Rusty Miller (5092519627) Okay to contact this Supervisor: Yes

#### Civil Engineer

Description: Civil engineer at the Grand Coulee Dam supplying 671,000 acres with irrigation and creating 6,807 MW of hydropower to Bonneville Power Administration (BPA) to provide electricity to the northwest region of the US. Tasks include writing large and small capitol scopes of work, preparing schedule documents, creating and critically evaluating site visit reports, reviewing technical drawings, business case portfolios, and project designs at critical design milestones, managing engineering consultants and contractors on work projects until completion, approving projects as 100% complete. Achievements: Started as GS-11 level Civil Engineer. Promoted to GS-12 on 07/18/2021. Mentoring new hire civil engineer. Guided 3 projects to completion in 2020 and initiated 3 additional projects for completion in 2021.

Virgin Islands Waste Management Authority

06/2020 - Present

3200 Demarara

Salary: \$75,000.00 USD Per Year Charlotte Amalie, VI 00802 US

Hours per week: 40

Supervisor: Geoffrey Watson (3407159100) Okay to contact this Supervisor: Yes

# Staff Engineer

Description: Staff engineer on civil and environmental projects for St. Thomas, St. John, and St. Croix in the U.S. Virgin Islands. Wrote wastewater and solid waste scopes of work, prepared bid documents, analyzed and accepted bid submittals, prepared engineer cost estimates, managed engineering consultants and contractors on work projects until completion, approved projects as 100% complete, accepted final work invoices for payment approval, interviewed job applicants, trained lesser experienced engineering new hire. Achievements: Created scope of work templates to streamline and standardize our bidding and procurement processes. Achieved "commendable" ratings for most categories in my 90-day evaluation. Pushed for internal procurement of resources to minimize costs of outsourcing work. Created and implemented a cost recording program to better make estimates and compare bid quotes. Improved scope of work turnaround time by 200%.

Faithful and Gould

# Environmental Protection Agency All Applicant Data Report Name:

10/2019 - Present

20860 North Tatum Blvd Ste 260 Fl 2 Salary: \$72,000.00 USD Per Year

Cave Creek, AZ 85331 US Hours per week: 40

Supervisor: William Gerber (5038046636) Okay to contact this Supervisor: Yes

#### Scheduler

Description: Project scheduler and project engineer in tool install for our Intel semiconductor fabrication client in both Hillsboro, OR and Chandler, AZ. Published weekly schedules for smaller projects starting at \$500,000 to larger projects ranging up to \$3 billion. Scheduling projects included AFO, IMO, DIC, DID, DIX fabrication plants in OR and OC1, OC11, OC12, OC23, FSB in AZ—schedules ranged from 100 to 2500 tools with 6 to 20 activities and milestones per tool. Utilized critical path method (CPM) in order to create logical schedules. Managed our client, design, labor, receiving dock, construction, and QA/QC teams in order to build schedules and update them weekly. Created schedule analysis reports in order to create standard durations, reflect progress of installation, and performance against schedule. Trained scheduling staff new hires, created and maintained training materials and official best practices. Achievements: Hired on as full-time direct employee 05/2017 after 6-month contract with Aerotek was fulfilled, promoted from Scheduling Analyst II to Scheduler 04/2018. Received consistent recognition from F+G team as well as client teams. Streamlined scheduling and report creation processes to improve efficiency by 75%.

FedEx Office 06/2017 - Present 475 NW 23rd Ave

Salary: \$18.75 USD Per Hour

Portland, OR 97210 US Hours per week: 40

Supervisor: Brandon Redfield (4087170127) Okay to contact this Supervisor: Yes

#### Lead Consultant

Full-time (40 hours per week) from 01/2008-09/2011 and 05/2015-11/2016. Part-time (20 hours per week) from 09/2011-05/2015 and 11/2016-06/2017. Description: Worked in all sized stores with annual sales goals of \$200,000 to \$3,000,000, typically meeting or exceeding the monthly and annual sales goals. Wrote schedules, managed payroll, interviewed applicants, trained new hires and tenured employees, created bids, ordered and received supplies, managed print production and shipping flow, resolved disputes or complaints between team members or customers, and analyzed financial records. Achievements: Promoted to Assistant Manager 06/2010, promoted to lead consultant 06/2016. Lead multiple store teams to exceed monthly and annual sales goals over 100% compliance. Lead multiple shipping teams to exceed percentage packed shipping goals. Established myself as an expert at all business offerings and a resource for all team members.

Portland State University: Capital Projects and Construction

06/2015 - Present 1825 SW Broadway

Salary: \$11.00 USD Per Hour

Portland, OR 97201 US Hours per week: 20

### Engineering Technician and Archivist

Description: Designed basic structures for infrastructure, and photographed construction projects' progress. Catalogued and archived As-Built drawings, O&M manuals, and other documents to the archive. Aided architects and engineers in day-to-day needs within the

office setting and with field work. Checked in and photographed project progress to report back to the professional engineers. Achievements: Oversaw the library lighting and ceiling rehabilitation project to completion. Created a new system of cataloguing and filing system for engineering and construction plans and documents alongside the university archivist.

Earth Advantage 10/2013 - Present 623 SW Oak St Ste 300

Salary: \$0.00 USD Bi-weekly Portland, OR 97205 US

Hours per week: 24

Residential Technical Intern

Description: Aided in data collection for Green Homebuilder of the Year Awards, broker marketing, website. Inspected homes alongside field technicians for Earth Advantage green home certification. Learned the basics of building science, green building, and LEED building. Assisted in green and LEED building consultation meetings with contractors and stakeholders. Achievements: Rated at "exceeds expectations" at internship conclusion.

NOVA Group

11/2007 - Present

19F Kintetsu Shin Namba Building Salary: \$2,500.00 USD Per Month 1-4-38 Minatomachi, Naniwa-ku

Hours per week: 40

Supervisor: Office (0672203930)

Okay to contact this Supervisor: Contact me first

Osaka, 27 JA

# English Teacher

Description: Conversational English teacher leading 37 lessons per week with students ranging in age from 4 to 74. Classes were primarily English communication with up to 4 students, and discussion groups with up to 10 students. Administrative duties included student ability assessments, counseling reports, creation and demonstration of customized lessons for prospective students, and team-based curriculum development. Achievements: Achieved 100% customer approval within the first month.

Education: Portland State University

Portland, OR US

- 12/2015

Major: Environmental Engineering

Boston University Boston, MA US - 09/2007

Major: Philosophy

University of Cincinnati

Cincinnati, OH US

- 03/2004

Major: Philosophy

Languages: English

Spoken: Advanced

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# Environmental Protection Agency All Applicant Data Report Name:

Written: Advanced Read: Advanced

Spanish

Spoken: Novice Written: Novice Read: Novice

References: Rusty Miller Bureau of Reclamation Supervisory Civil Engineer Phone Number: 5092519627

Email Address: rmiller@usbr.gov Reference Type: Professional

Geoffrey Watson

Virgin Islands Waste Management Authority

Acting Engineering Director Phone Number: 3406420487

Email Address: gwatson@viwma.org Reference Type: Professional

Evan Greenberg

Virgin Islands Waste Management Authority

Senior Engineering Project Manager

Phone Number: 6316177074

Email Address: evan.greenberg3@gmail.com

Reference Type: Professional

William Gerber

Intel

Senior Construction Cost Engineering Analyst

Phone Number: 5038046636

Email Address: wrgerber@gmail.com

Reference Type: Professional

Additional Information: Certifications: Environmental Professional Engineer (PE, BRPELS), Environmental Engineering Intern (EI, OSBEELS), Project Management Professional (PMP), LEED® Green Associate™ (USGBC), TRUE Advisor (Zero Waste, GBCI), OSHA 30-Hour Construction Safety. Software: Windows 10, Microsoft Office, Primavera P6, Adobe Suites, Autodesk.

# Contact

# **Profile**

I am a broadly trained hydrogeologist with expertise in surface water – groundwater interactions, contaminant transport, soil and groundwater remediation, and database management. My previous professional contributions include environmental investigations and reclamation with diverse government partners for sites impacted by industrial development, mining, wood treatment, and agrochemical contamination. I am scheduled to take my Washington Professional Geology License exam in October 2022.

# **Software Proficiency**

Programming in R
ArcGIS Desktop & Pro
ArcGIS Online
Microsoft Office Suite
Microsoft Project
Microsoft Teams
ProUCL

# Activities and Interests

Hiking, Camping, and Fishing Cycling (Road and Mountain) Gardening

# **Certifications**

40-hr HAZWOPER 8-hr HAZWOPER Refresher 8-hr HAZWOPER Supervisor CPR/ First Aid

# **Education**

PhD – Geology/ Hydrogeology from Washington State University, 2015 MS – Geology/ Hydrogeology from Washington State University, 2011 BS – Environmental Geological Sciences from Central Washington University, 2008

# **Professional Experience**

February 2022 to Current
Aquatic Unit Supervisor • Washington Dept. of Ecology Northwest
Regional Office • Shoreline, WA

As the Aquatics Unit Supervisor in the Toxics Cleanup Program Northwest Regional Office I was the first line supervisor for twelve professional staff in one of four units in the NWRO. As a Unit Supervisor I lead a team of site managers providing regulatory oversight to ensure that cleanup actions comply with the mission of the Department, Program, Model Toxics Control Act, and other applicable environmental laws, regulations, and policies. This position led the Lower Duwamish Waterway team and assisted with enacting the Puget Sound Initiative goals through extensive sediment and upland cleanup workload involving the largest and most complex sites in the Program and Northwest Region.

June 2018 to February 2022
Senior Hydrogeologist/ Project Manager • Tetra Tech Inc. • Helena,
MT

Managed remedial investigations and acted as a subject matter expert for groundwater remediation projects across the United States. Contributions included proposal development, daily client interactions, and development of site-specific reporting. As the Senior Hydrogeologist I directly supervised and mentored six to ten junior staff both in-person in the Helena office and remotely for junior staff across the western United States. Detailed contributions to specific projects are included in Attachment A.

June 2016 to June 2018

# Groundwater Program Supervisor • Montana Department of Agriculture • Helena, MT

In 2016 I was promoted to the Supervising Hydrologist in charge of managing the Groundwater Protection Program to ensure compliance with the Montana Agricultural Chemical Groundwater Protection Act (MCA 80-15). During his time the program reduced sample collection costs through improved study design and sampling efficiency for permanent monitoring wells, acquired tablets and new software to improve sample collection and data analysis, and expanded in situ monitoring capabilities with in conductivity, temperature, and depth sensors in all permanent monitoring wells. I also led the application of new methods to distribute monitoring results to the public through the development of ArcGIS Online interactive maps and secured funding to expand twenty weather stations and soil moisture sensors in partnership with the Montana Climate Office. My contributions to specific projects are included in Attachment A.

#### June 2014 to June 2016

# Hydrologist • Montana Department of Agriculture • Helena, MT

My primary role included conducting new research and monitoring projects aimed at determining the current extent of agricultural chemicals in groundwater, and regional groundwater vulnerability to agricultural chemicals. Additionally, I developed and presented educational material to promote surface water and groundwater protection at pesticide applicator trainings and established collaborations with other state organizations including Montana State University Extension, Montana Bureau of Mines and Geology, and the Montana Climate Office to expand data collection and the statewide groundwater monitoring network.

#### Summer 2012

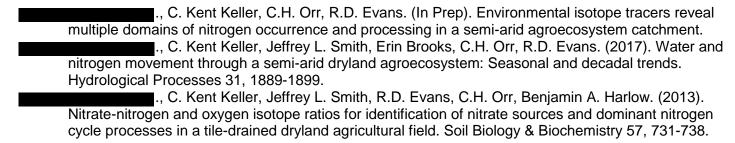
NSPIRE Fellow • Environmental Protection Agency – Western Ecological Division • Corvallis, OR Conducted a geospatial analysis on groundwater nitrate concentrations in the southern Willamette Valley approximately from Albany, OR to Eugene, OR. Produced a final report identifying the correlations of land uses, agricultural management practices, soil properties, and underlying geology to characterize the regional distributions of high-nitrate concentration groundwater and identify areas most likely to experience continued elevated groundwater nitrate concentrations.

# January 2010 – August 2010

# Lab Assistant • College of Sciences Stable Isotope Core Laboratory – Washington State University • Pullman, WA

Led the development for a new method of analysis for stable oxygen and nitrogen ratios of nitrate based on the Denitrifier Method, which uses the microbial mediated breakdown of nitrate in solution into nitrous oxide gas. Tasks included the development of standard operating and quality control procedures for the method. Method developed was completed to coincide with thesis field research project tracking nitrogen cycling and transport in dryland agricultural production.

# **Peer Reviewed Publications**



# **Attachment A: Project Contributions**

# Industrial, Petroleum, and Chlorinated Solvents

Lower Duwamish Waterway, Tukwila, Washington, 2022 – Current. Dr. Kelley leads a team of project managers, hydrogeologist, toxicologist, environmental engineers, and sediment specialists as the Lower Duwamish Waterway (LDW) Coordinator. The Department of Ecology leads efforts to control sources of pollution from the drainage area surrounding the LDW Superfund site and the U.S. Environmental Protection Agency (EPA) oversees cleanup of the river sediments. The LDW Superfund site is a 5-mile portion of the Duwamish River that flows northward into Elliott Bay. EPA added the LDW to the Superfund National Priorities List in 2001. Ecology added the site to the Washington Hazardous Sites List in 2002. Before sediment cleanup can begin, Ecology must sufficiently control the sources of pollution to the river sediments, including investigations across more than 20,000 acres of land that drains into the river. Source control includes identifying contaminant sources and extent and taking actions to stop or reduce sources of contamination before contaminants reach the LDW.

Texaco Sunburst Works Refinery, Sunburst Montana, 2020 - 2022. Dr. Kelley and his team are providing Montana DEQ with technical support and review for the draft human health risk assessment to ensure this document accurately evaluates risks at the Texaco Sunburst Works Refinery Facility (Facility). The Facility is primarily located on the southern and western edges of Sunburst, Montana and is an inactive 380-acre oil refinery operated by Texaco from 1924 until 1961. As part of the review process Tetra Tech provides in-depth analysis of tables and calculations used in the human health risk assessment, toxicological information and exposure factors, and whether the risk assessment was completed according to the Human Health Risk Assessment Work Plan for the Facility. For the Facility feasibility study work plan Tetra Tech ensure the work plan proposes to effectively evaluate the feasibility of various remedial technologies that could be utilized at the Facility, evaluation if other technologies should be considered, and if any considered technologies proposed have a minimal chance of success at the Facility. Tetra Tech also identifies whether treatability studies are necessary to adequately evaluate a proposed technology. Following acceptance of the feasibility study work plan for the Facility, Tetra Tech provides review and technical support for the draft and revised feasibility study. Technical support for the FS includes comprehensively review all text, tables, figures, and appendices of the FS, and provide technical comments.

Butte South Main St. Solvent Plume, Butte Montana, 2021 - 2022. Dr. Kelley and his team are providing EPA Region 8 START with technical support for the Preliminary Assessment (PA) and Site Assessment (SI) under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR Part 300) for the Butte South Main Street Solvent Plume. Previous sampling at the Site indicated the presence of both tetrachloroethene (PCE) and trichloroethene (TCE). Dr. Kelley was also the lead author for the Preliminary Assessment Report and developed the Hazard Ranking System score for the site.

# **GIS-Based Projects**

**Unexploded Ordnance Survey (UXO), 2018 – 2022, Limestone Hills, MT.** Dr. Kelley developed and maintains an ArcGIS Online Mapping system and geodatabase to track grid status and other project data with near real-time updates. The online mapping system was designed to incorporate geophysical survey data for tracking detected anomalies through the detection, validation, and quality control phases of the project. Dr. Kelley also developed project specific field-data forms using Survey123 to streamline data import and create faster pathways for data analysis and display.

Carpenter-Snow Creek NPL Site, 2018 - 2022, Neihart, Montana. Dr. Kelley provides support for the investigation and remediation of the Carpenter-Snow Creek NPL Superfund Site near Neihart, Montana. The CSC NPL site includes 70 abandoned mines and associated impacted lands within the Carpenter Creek, Snow Creek, Belt Creek, and Neihart slope drainages. Dr. Kelley is involved in mine-impacted water flow monitoring, installation, and sampling of well points, soil sampling, surface, and groundwater sampling, adit treatability studies, and providing support in data management and technical writing of reports. Dr. Kelley developed a geospatial sediment transport model to simulate sediment erosion in Carpenter Creek, Snow Creek, and Neihart Slope watersheds. The model allows for a quantitative evaluation of waste rock piles to help evaluate the previously developed qualitative waste rock pile priority rankings. The outcomes from the erosion model included prioritizing areas for remediation or response, inform development of achievable RAOs, and screening treatment technologies and process options for the Site.

#### Wood Treatment Site Reclamation

Central Post and Treating Company, 2018 – 2022, Lewistown Montana. Dr. Kelley serves as the project manager for a Phase II investigation and Voluntary Cleanup Plan under Montana's Comprehensive Environmental Cleanup and Responsibility Act (CECRA) to address pentachlorophenol, dioxin, and metal contamination at former pole treatment site and landfill. The investigation involves extensive soil and groundwater sampling and development of site-specific screening levels for multiple contaminants of concern. The investigation completed with the production of an Environmental Assessment and Voluntary Cleanup Plan that includes removal of contaminated soil and evaluation of leaching risks form the site to shallow groundwater. The site includes approximately thirty feet of burned landfill debris and two to three feet of capping material and street sweepings used as ground cover at the site. Wood treatment was conducted overtop the original landfill cap with at least two know instances of large spills during two fire responses by the local fire department to extinguish fires at the site. Vadose zone modeling from the cap through the garbage layer to shallow groundwater was conducted during the evaluation of pentachlorophenol leaching risks at the site.

Montana Pole and Treatment Plant (MPTP) Superfund Site, Montana Department of Environmental Quality (MT DEQ), 2018 - 2022, Butte, MT. Dr. Kelley serves as the project hydrogeologist for the MPTP Superfund site located in Butte, Montana. MPTP was a former wood treating facility which contaminated soils, groundwater, and nearby Silver Bow Creek with a variety of chemicals including pentachlorophenol (PCP), polycyclic aromatic hydrocarbons (PAH), polychlorinated dibenzo-p-dioxins (dioxins) and polychlorinated dibenzofurans (furans), and total petroleum hydrocarbons (TPH). Current tasks include evaluating the current operations versus mass removal from soils under Interstate-15 which bisects the site and evaluation of the pump and treat water treatment plant. Residual contamination from soils under the Interstate has not been removed and continues to be source of contamination for the site's plume captured by the water treatment plant. The treatment system includes two capture trenches which pump water through four granular activated carbon vessels for treatment. Water from the vessels is discharged to surface water. The Tetra Tech is currently evaluating technologies to address the contaminant plume and decrease the active treatment life of the plant. As part of the evaluation Dr. Kelley developed computer code in R to rapidly analyze flow, groundwater elevation, and water chemistry data collected at MPTP to evaluate current site conditions with remediation goals. Additionally, Dr. Kelley has led a team of Database Programmers and GIS Analysts to transition the MPTP Microsoft Access Data base to a SQL Server Environment coupled with an ArcGIS Online Story Map and Dashboards to create a user-friendly publicly accessible website for viewing water treatment plant performance and monitoring results for groundwater and surface water at the Site.

Rhodia Maiden Rock Mine, 2019 - 2022, Silver Bow County Montana. Dr. Kelley and his team are providing Montana DEQ with technical support for of the Remedial Investigation Work Plan and field oversight under Montana's Comprehensive Environmental Cleanup and Responsibility Act (CECRA) for the Rhodia Maiden Rock Mine. The Rhodia Maiden Rock Mine is an inactive 80-acre phosphate mine and wood pole treatment facility located in southwestern Montana. Dr. Kelley and a team of scientist provided review of the remedial investigation work plan for DEQ and provide oversight and confirmation sampling during field activities for implementation of the work plan.

# **Abandoned Mines and Mine Reclamation Sites**

**ACM Smelter, 2020 – 2022, Black Eagle, Montana.** Dr. Kelley provides Remedial Investigation and Feasibility Study Support for U.S. EPA at the ACM Smelter and Refinery Site located adjacent to the unincorporated community of Black Eagle along the Missouri River in Cascade County, Montana. The Site is impacted by historical smelter operations resulting in impacted soil and groundwater with heavy metals including arsenic, antimony, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc. Technical support includes document review (work plans, technical memorandums, data summary reports, and key CERCLA RI/FS documents including RI reports, FS reports, conceptual site models, and risk assessments) and supporting EPA during ROD and Proposed Plan preparation.

Iron King Mine Feasibility Study 2018 - 2022, Prescott, Arizona. Dr. Kelley led a team of engineers and scientist during interpretation of site hydrogeology and geochemistry for evaluation for the potential for mine impacted water to reach surface water and groundwater at the former mine and smelter areas. Site wastes include waste rock, tailings, impacted soils and sediments, mine-impacted water, and RCRA wastes including dioxin and dross with primary COCs identified as: arsenic, cadmium, copper, lead, and zinc. Groundwater at

the site is divided into five hydrostratigraphic units. Site tailings are identified as the uppermost water-bearing unit followed by the Hickey Formation including three hydrostratigraphic units: the Upper Tertiary Hickey Basin Fill, Middle to Upper Tertiary Hickey Basalts, and Lower Tertiary Hickey conglomerate, and the precambrian basement rocks at the Site include the Iron King Volcanics (IKV) and the Spud Mountain Series (SMS), which comprise the fifth hydrostratigraphic unit. The site tailings are characterized as an aquitard due to low transmissivity with a perched water which daylights in Chaparral Gulch. Deeper groundwater at the site from the three Hickey Formation hydrostratigraphic units daylight in the Agua Fria River as the primary source of baseflow for the river.

Rumsey Mill, 2021 – 2022, Philipsburg, Montana. Dr. Kelley and his team are supporting EPA Region 8 START with the Expanded Site Assessment (ES) under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for the former Rumsey Mill Site in Granite County Montana. Historic mining activities have impacted soil, sediment, and surface water in the area with concentrations of heavy metals including mercury, arsenic and lead at elevated concentrations for most human and ecological receptors.

Marysville-Ophir Mine Districts, - 2021 – 2022, Lewis & Clark County Montana. Dr. Kelley and his team are supporting EPA Region 8 START with the Preliminary Assessment (PA) and Site Assessment (SI) under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for four former mine sites in the Marysville and Ophir mining Districts. The purpose of the PA is to differentiate sites which pose minimal potential threats to human health and the environment from sites that warrant further investigation and completion a Hazard Ranking System Score.

Mine-Influenced Water Treatment (MT DEQ), 2018-2019, Belt, Montana. Dr. Kelley is the project Hydrogeologist for analyzing site flow data and water quality for the investigation, monitoring, and remediation of mine impacted waters (MIW) in Belt, Montana. Dr. Kelley's hydrologic analysis was used during design of a water treatment facility for the site, and to identify locations for sludge waste injection into the underground mine workings. Groundwater at the site seeps into the abandoned coal mine and discharges water with low pH and high metal concentrations through historical adit locations into Belt Creek.

**ASARCO Zinc Smelter, Ohio EPA Superfund Site, 2018, Columbus, Ohio.** Dr. Kelley conducted the hydrogeological analysis for supplemental remediation of zinc and cadmium waste released at a former zine smelter site. Using surface water, sediment, soil, and climate data, Dr. Kelley and his team developed a hydrologic budget and conceptual hydrologic model for the site to evaluate the performance of a passive water treatment system and develop other treatment alternatives for treating shallow groundwater for discharge into nearby surface water.

### **Emergency Response & Management**

**Luttrell Water Treatment System, Butte Montana, 2021 - 2022.** Dr. Kelley and his team are providing EPA Region 8 START with technical support for the operation of the water treatment system for the Luttrell Repository in the Upper Tenmile Creek Mining Area Superfund Site for the summer 2021 operational season.

**2018 - 2020 California Wildfire Response (Cal OES).** Dr. Kelley served as a senior field team lead during response to the 2018 California Wildfires in Shasta, Trinity, Lake, Mendocino, and Colusa counties. In this role Dr. Kelley provided senior leadership of tasks including: 1) assessment, mapping, and documentation of greater than 200 fire-impacted properties, including identification and flagging of major site utilities and hazards, and 2) post-debris removal confirmation soil sampling to document completeness of site cleanup. During his more than two months in Northern California, Dr. Kelley was responsible for training over a dozen responders in site documentation confirmation soil sampling protocols and documentation. Dr. Kelley also served as an off-site Environmental Branch Director/ Senior Scientist for the Camp Fire Response overseeing a team of scientists and engineers completing soil and air data validation and individual site reports for post-debris removal.

# **Agrochemical Investigation**

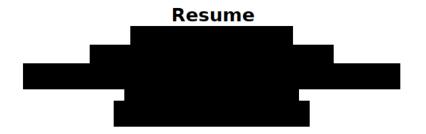
Lower Yellowstone River Basin Pesticide Transport, 2017- 2018, Eastern Montana. Dr. Kelley developed an ongoing analysis of agricultural chemical transport and exchange between the Yellowstone River and shallow alluvial aquifers from Livingston, MT to the confluence with the Missouri River. He performed large-scale data analysis of surface water and groundwater data, and geospatial modeling of agricultural land use

and hydrology in the region to identify correlations between land uses and pesticide detections in the Yellowstone River.

Groundwater Monitoring for Pesticides and Nitrate in Greenfield Bench, 2014 - 2016, Fairfield Montana. Dr. Kelley led the last two years of monitoring and the final review of all monitoring activities on the Greenfield Bench resulting from a Specific Management Plan developed by the Montana Department of Agriculture in 2001. Monitoring activities were conducted over the ~86,000 acres of the Greenfield Bench Irrigation District to track pesticide concentrations and movement in groundwater. Monitoring efforts were completed with the production of the Groundwater Monitoring for Pesticides and Nitrate in Greenfield Bench, Montana Final Report.

Helena Valley Groundwater Assessment for Agricultural Chemicals, 2014-2015, Helena, Montana. Dr. Kelley implemented a groundwater investigation into the distribution of pesticides in aquifers within the Helena Valley, MT. The study was performed to determine potential impacts to groundwater from the use of pesticides in the region. Dr. Kelley collected groundwater samples from monitoring wells in cooperation with the Lewis and Clark Water Quality District and residential wells with cooperating landowners. Water samples were analyzed for 103 pesticide and pesticide metabolites and compared with local land-uses to determine likely sources of detected analytes.

Montana State-wide Monitoring for Agricultural Chemicals, 2014 - 2018, Montana. Dr. Kelley expanded and updated the Montana Department of Agriculture's permanent monitoring well (PMW) network. He reduced sample collection costs through improved study design and sampling efficiency for PMWs and regional projects. Acquired field tablets and new software to improve sample collection and data analysis processes, and expanded monitoring capabilities with in-situ sampling of groundwater levels, water temperature, and conductivity to better track aquifer dynamics. He also developed a new partnership with the Montana State Climate Office to co-locate new weather and soil moisture monitoring stations (Mesonet) and the Department's permanent monitoring wells.



# **Education**

University of Minnesota, Twin Cities 2009 PhD Ecology, Minor Microbial Ecology

Carleton College BA Biology 2001

# **Experience**

Water Protection Bureau Chief Present

'

MT Department of Environmental Quality

40 hours

April 2014-

per week Duties:

I oversee many sections within the Department's Water Quality Division by managing the supervisors overseeing staff involved in many of the same water quality regulatory duties as I supervised for the State of Nebraska previously. These staff and supervisors are located in four offices statewide. The primary duties of the Bureau are to provide water quality education, discharge permits, rule development, TMDLs, nonpoint source grant management, source water protection, well evaluation, data management, technical support and inspections. My duties include not only managing these programs, but the business and administrative functions of the Bureau, such as budgets, personnel decisions, policy changes and talent development. I also serve as the Department representative for ACWA and GWPC setting various national environmental agendas and policies. Because regulatory work can sometimes land the Bureau in court, I serve as a strategist and expert to walk the Bureau through appeals and litigation. Through the regulation of water quality, the Bureau works closely with virtually every program in the Department, ranging from mines, superfund sites, and even tax certification of pollution control equipment. Although the Bureau primarily is tasked with the regulatory side of the Water Quality Division, it works closely with other programs including engineering and water quality standards. There are very few programs in the Department that do not have a water quality connection making the Bureau an integral

cog in not only the Department, but the State as a whole. This is why I am also charged with promoting the Bureau and maintaining relationships outside the Department, whether they are with the EPA, Montana Legislature, various stakeholders or the public at large.

During my time in the position, the Bureau has undergone a major makeover in an attempt to improve our image both within and outside government, retain talented personnel, and improve workload efficiency, all while not compromising our mission to protect water quality. This involved hiring new staff and breaking down barriers that prevented relationship-building. The staff within each section has exploded its productivity. Many of the inspectors have completed their inspection assignments with months remaining in the fiscal year and toned-down their aggressiveness and instead working with people to understand their business and help them understand how they can comply with regulations. The technical support staff has lost FTEs and have not missed a beat. In fact, they are nearly finished with an initiative to build a database that will cover the entire permitting and inspection programs. The permit writers have almost doubled their output, despite losing FTEs. The TDML program and permitting programs satisfied backlog lawsuits. Staff went from coldly avoiding communication to being almost too talkative and spending time getting to know the regulated community. The public image of the program has improved dramatically, which is best illustrated tin the number of appeals and lawsuits that involve Bureau permits dropping dramatically to only one in the past year. The Bureau suddenly went from rarely approached by the public to now being unable to keep up with the number of invitations to talks, working groups, and seminars. The Bureau has also opened itself up to sister programs and gaining a reputation of consensus-makers, not rivals.

Board Member April 2015-

Present

National Ground Water Research and Education Foundation 0.5 hours per week

Duties:

Duties:

I was specifically recruited to serve as a board member of this foundation due to my reputation doing research on biogeochemical processes. The Foundation raises funds and provides research grants and scholarships to government agencies, universities and nongovernment agencies interested in doing either research or outreach in attempt to find workable solutions to ground water problems facing the nation.

Executive Board Member – Past President 2015-Present Ground Water Protection Council week

2 hours per

March

I was specifically recruited to serve as a board member of this foundation due to my reputation as a regulator and researcher of groundwater issues. The Council works on a variety of topics related to groundwater protection, including underground injection control, source water protection and hydraulic fracturing. The council was the first to develop a database to track underground injection and its FracFocus continues to be the worldwide leader in data on oil and gas wells. By being on the front of the issues, the Council is regularly asked to testify at the federal level and consult in the development of rules and policy with the EPA.

Water Quality Assessment Supervisor August 2013-April 2014
Nebraska Department of Environmental Quality 40 hours per week

This was an expansion of my duties by moving the Permits and Compliance Unit and the Engineering Unit in the Water Quality Division under my supervision. With this expansion of my duties, I oversaw 45 staff, including inspectors, engineers, geologists, permit-writers, lab technicians, and administrative assistants. I signed, stamped or initialed all letters and permits generated by the group. I formulated and managed a \$10 million budget and negotiated for additional funds. I signed off on all inter-agency agreements and worked directly with the EPA on their plans, from funding to inspection targets to enforcement. I worked on strategic planning. I testified as needed during litigation. I also presented or testified during city, county or state meetings. I recognized opportunities to collaborate within NDEQ's divisions and between government agencies, universities, businesses, trade groups and the public. I continued the duties described below as a section supervisor and oversaw the duties of the Permit and Compliance Unit Supervisor, which was my position until January 2013. By overseeing the Engineering Unit, double checked the engineering calculations for wastewater infrastructure, stamped plan when needed, made regulatory determinations, and mediated professional disagreements. The engineering unit also placed me in direct oversight of NDEO's secondary containment, load-out and chemigation programs. I trained all new staff from inspectors and permit writers to supervisors. I was involved in the development of eReporting for NDEQ. After resolving permitting bottlenecks and issues with problematic staff and a supervisor, my team eliminated the section's NPDES permit backlog and addressed the program issues requiring resolution by EPA.

Chairman April 2013-May 2014
Nebraska Ground Water Monitoring Advisory Committee 0.5 hours per week
Duties:

**Duties:** 

I chaired the committee designed to address groundwater quality and quantity issues. Nebraska is fortunate to be home to one of the world's largest aquifers, which allows for its famous corn crop to exist. However, because of that corn crop, Nebraska's aquifers are heavily impacted by agrichemicals, affecting the drinking water of nearly 85% of Nebraskans. Agrichemicals in groundwater also taint surface water through natural seepage or the new practice of pumping groundwater into rivers to meet surface water rights and testy interstate river compacts. This committee serves to bring together stakeholders to educate one another on each stakeholder's perspective, activities taking place, and new data with the hope of working through issues. My job as chair was to keep an open dialogue, ask the difficult questions, and keep everyone focused on the task at hand.

Water Quality Assessment Section Supervisor Dec 2012-April 2014

Nebraska Department of Environmental Quality 40 hours per week

Duties:

I oversaw many programs within NDEQ by managing the supervisors and staff, managing the multimillion dollar budget, updating regulations, and ensuring a healthy relationship between the public, businesses, state agencies, the federal government, nonprofits and lobbyists. The staff within each unit covers a variety of different programs. We worked on mining and mineral exploration regulations, which in Nebraska primarily deal with in-situ uranium mining. We also determined the need for monitoring wells and tracked possible pollutants emanating from new or established industries. We also worked on emergency response and remediation of contaminated sites, whether they are superfund sites, leaky underground storage tanks, military installations or agrichemicals. We evaluated multiple classes of UIC wells, whether they were for septic systems, heat pumps, waste disposal or even fracking. We ran a comprehensive drinking water program under the Safe Drinking Water Act, including setting drinking water standards, evaluating sole source aguifer applications, and establishing Wellhead Protection Areas and Groundwater Management Areas. We worked with the state revolving fund staff on infrastructure projects. We provided a variety of GIS and ground water modeling services for Nebraska's regulated communities. We frequently collaborated with NDEQ's Hazardous and Integrated Waste Section on emergency response, waste determination and proper disposal of waste. We worked on pipeline citing and environmental impact statements. I renegotiated our performance partnership grant with EPA to spend \$2,500,000 on test holes and a statewide monitoring well network to better understand the underlying geology of Nebraska and expand its monitoring well network into gaps in coverage.

I also oversaw all surface water programs, including the NDEQ's field, laboratory, and office staff. These programs take a variety of field measurements and gather water, algae, invertebrate and fish samples, running them through a battery of tests to determine water quality impairments and advisories. We ran a comprehensive fish tissue program and issue health alerts. We performed emergency responses to spills and fish kills. We updated Nebraska's 303(d) lists and work on TMDLs. We updated the regulations and set water quality criteria. We administered a variety of grant programs, such as 319 grants, to help improve water quality. I worked closely with US Army Corps of Engineers on wetland rehabilitation, wetland mitigation, and 401 certifications. We contracted for work to be done by third parties, such as remediation, carry out investigations, and administer research projects in collaboration with USGS, USDA and academic institutions. We also developed education programs for everyone from children to adults. We utilized my computer experience developing databases for my graduate research to manage our massive datasets that go into STORET, as wells as handled the large load of projects, inspections and investigation being performed by staff. I worked directly with the supervisors of the other divisions within NDEQ and other agencies to address cross-jurisdiction issues. I worked directly with IT staff to streamline our work, become more electronically-based, and have our permit application materials and public records online. I also made the critical decisions determining the severity of violations discovered by NDEO investors and how we will proceed, whether continue to proactively work with the violator to help return things to compliance or pursue legal action. I served on many committees, such as the Platte River Recovery Implementation Plan Committee, that are typically interagency, interstate, and have many stakeholders. Lastly, I was involved in the daily personnel management from hiring to promotions to discipline to training to keeping moral high around the office. I oversaw all employee performance management. I spent much of my day in meetings, having to rapidly think on my toes as I moved from one high priority item to the next, often addressing multiple issues at once. I am very skilled at multi-tasking and learning on the fly with limited information. Overall, my job was to set the agenda for the section to maximize the staff's exceptional talents and best use our resources to serve Nebraska.

Permits and Compliance Unit Supervisor 2012

June 2010-Dec.

Nebraska Department of Environmental Quality week

40 hours per

**Duties:** 

I oversaw the permitting of state and federally-delegated water programs that focus on conservation, land-use and agriculture (livestock and crop production). I also reviewed all NPDES and pretreatment permits generated by the NDEQ, from CAFOs to stormwater to publicly-owned treatment works

to mining operations. I edited regulations based on new laws, court rulings, technology and emerging issues. I wrote guidance documents, holding public meetings, giving presentations, and ultimately signing off on any permit after a thorough review of the application for proper engineering, best management practices, endangered species determinations, environmental impact, and life cycle analysis of the sustainability and closure of operations. Furthermore, I teamed with federal (EPA, Army Corps of Engineers, Fish and Wildlife Service, Department of Agriculture including Natural Resources Conservation Service and Forest Service), state, nonprofit, industrial, and academic experts to establish the proper engineering or conservation-based approaches to resolve water quality issues. I worked with stakeholder groups to educate them and compromise on issues. I responded to phone calls and emails, often simultaneously, all day long from staff, the media, politicians, advocacy groups, academia and the public.

I oversaw investigations and inspections performed by state personnel in multiple offices throughout Nebraska. These investigations and inspections searched for possible violations of state water laws. I determine when corrective action is necessary, which typically involves working with the individual or operation to come into compliance, or in some cases necessitated referral to the Nebraska Attorney General and giving testimony at legal proceedings. I daily negotiated and resolved conflicts between scientists, land owners, the public and government agencies.

I served on NRCS 's State Technical Committee evaluating publications, protocols, budgets, and research. I used my research background to serve as a liaison between the NDEO and researchers with the USDA and Nebraska's universities and colleges. I translated research findings into policy recommendations and mediated between scientists and the NDEQ when their findings did not completely agree with policy. I represented the NDEQ at national and regional meetings, symposia, workshops, and conferences on agriculture, land-use and climate change. I held training sessions for the public and my staff. I gave public presentations and developed collaborations for possible research that right lead to policy changes. I performed all major supervisory duties including hiring and firing of staff, completing performance evaluations, training, resolving worker conflicts, rewarding staff, day-to-day management, team building, and budget formulation and execution. I reduced paper by moving towards a more electronically-based system and improved the overall efficiency of the unit so that we met deadlines with time to spare. I monitored greenhouse gas regulations that pertain to land-use and agriculture.

Program Specialist 2010 Nebraska Department of Environmental Quality week August 2009-May

40 hours per

# **Duties:**

Duties:

I analyzed engineering specifications and emissions data from a variety of combustion sources, including generators, coal and biomass-fueled power plants, incinerators, Portland cement kilns, gravel pits, biogas operations, and biofuel operations. I performed prevention of significant deterioration determinations and wrote Title V permits. I reviewed greenhouse gas regulations, determined applicable regulatory thresholds, and extrapolate from available data the possible impact of greenhouse gas regulations on industrial and agricultural sectors through various regulatory scenarios, including the use of offsets and best available control technology. I served as a staff statistician and computer modeler of emissions plumes.

Visiting Assistant Professor 2009 Creighton University week August 2006-July

40 hours per

I developed and taught lectures and/or labs in Biostatistics, Terrestrial Ecology, Marine and Freshwater Ecology, Environmental Science, Current Topics and Emerging Issues in Ecology, General Biology, Animal Behavior, and Microbiology. I ordered lab supplies, devised methods, and repaired laboratory equipment. I handled hazardous waste disposal. I ran field courses on geology, geography and ecology in National Parks, Grasslands, and Forests from the mountains of Colorado and Wyoming to the iron ore mines and lakes of Minnesota. I taught students to investigate and prepare environmental impact statements. I taught many of the principles of forestry, forest health, conservation, and preservation, including covering the mission, regulation, and management of a variety of types of federal lands, from Waterfowl Production Areas to National Forests and Grasslands. I taught about the distribution, life cycle, diseases and ecological adaptations of organisms as well as the impact of anthropogenic forces on those organisms. I taught natural resource management of forests, grasslands, and lakes for recreational, commercial and conservation purposes. I taught some of the treatment techniques to restore disturbed and degraded ecosystems. I taught stewardship-based and active management approaches to maintaining ecosystems and satisfying stakeholders. I taught a variety of mining processes, including biomining, and regulations that govern such activities. I taught waste management life cycle analysis, RCRA and CERCLA. I taught the economics and regulatory framework of managing ecosystems to account for public and commercial interests in the goods extracted from an ecosystem, services that ecosystem provides, and values of stakeholders.

I served on curriculum, budget, grant and scholarship review committees. I wrote grant proposals, reviewed book chapters, and published and peer-reviewed research. I formulated, presented, analyzed and executed budgets. I supervised undergraduate research, staff, the University greenhouses, and

the Department's computer lab. I ran a variety of paleoecological research studies utilizing sediment cores. I held public workshops for the young and old. I served as an expert for the local media, and provided assistance to a local forest preserve in identifying beetle and moth biodiversity and possible invasive species. I was an insect, amphibian, and plant taxonomist on bioblitzes, or rapid biodiversity surveys of Nebraskan and Iowan forest and prairie preserves. I also worked with the Henry Doody Zoo in developing germination and propagation techniques for endangered plants.

Prescribed Burn Consultant

Springs 2005-

2009

Private Practice

12 hours one weekend a year

Duties:

I managed prescribe burns where wind, humidity, fuel load, and fuel moisture were used as predictors for the burn efficiency and spread. Before and after each burn, the sites were monitored to assess the resulting fuel load, plant diversity, invasive species, and change in woody plant biomass. I volunteered all my time and expertise.

Principle Investigator

January 2006-

Iune 2008

University of Minnesota, Twin Cities

40 hours per

week
Duties:

I analyzed ecosystem changes and carbon burial rates in Minnesota in the past over multiple wet-dry periods using sediment cores. I collected the cores, dated sediment layers using <sup>210</sup>Pb and <sup>14</sup>C dating, and analyzed the changes in the carbon, nitrogen, and phosphorus. in relation to the climate and ecosystem present at the time the sediment layer was deposited.

PhD Dissertation Research

May 2002-

July 2006

University of Minnesota, Twin Cities

40 hours

per week Duties:

I biomanipulated predator populations to create alternative stable states in wetlands to understand stable states and determine how the introduction of predators affects ecosystem properties. I chose wetlands in brush lands and prairies in Minnesota to study because they have closed watersheds so I did not have to account for animals or nutrients leaving the ecosystem. With collaborators from the US Fish and Wildlife Service, MN Department of Natural Resources, and various universities, I pieced together the entire food web and trophic cascade from the top predators down to the bacteria. Separately, I focused on the terrestrial and wetland plant, bacterial, and algal diversity, stoichiometry and productivity to determine net ecosystem productivity and the cycling of nutrients in the wetland and its watershed.

Stable isotopes were used to help track the movement of carbon, nitrogen and phosphorous through the watershed and wetland. I used various statistical, theoretical, and engineering calculations and models to arrive at my conclusions. I devised the methodology for the research, determined budgets, hired assistants, coordinated field activities, ordered supplies, and repaired lab equipment. I obtained all the necessary permits, wrote grant proposals, and received funding from the National Science Foundation and state programs to relieve my dissertation adviser and collaborators of funding all my work. Altogether, my specific research brought in over \$475,000 in funds in addition to the funds acquired for other aspects of the project. I wrote all the progress reports that were required by the funding sources. I also aided my adviser on his research into the biomagnification of PCBs in food webs.

Collaborative Research Task Force 2006

January 2005-July

University of Minnesota, Twin Cities *Duties:* 

1 hour per week

I worked for the University of Minnesota President as the sole student on a committee of faculty and administrators trying to identify barriers that are limiting collaborative research between disciplines and developing a framework for breaking down those barriers.

# **Curriculum Vitae**

Address:

Cell Phone Number:

Email:

National Status: USA Citizen

#### EXPERIENCE

Plant Nutrient, Fertilizer, Contaminant, Fumigant and Pesticide Analysis, Plant Protection, Water Quality and Agro-Ecology:

- Assisting administration of Federal Insecticide Fungicide and Rodenticide Act within the State of California.
- Administration of pesticide ordinance' 1971 and pesticide rules' 1985 in Bangladesh.
- Working knowledge of food safety program for the growing, harvesting, packing (GAP, GHP, GMP, HACCP).
- Soil Chemistry, Soil Fertility, Soil Microbiology, Soil Conservation, Water Management, Phyto-remediation and Environmental Assessment.
- Sustainable land use, participatory testing and technology transfer.
- · Teaching graduate and undergraduate students as a tutor.

#### **EDUCATION**

- **Ph.D.** (Soil Science, 2001). Soil and Earth Science Group, Institute of Natural Resource Sciences, Massey University, New Zealand.
- MApplSci (Environmental Soil Science, 1996). Soil and Earth Science Group, Institute of Natural Resource Sciences, Massey University, New Zealand.
- M.Sc. Ag. (Soil Science, 1982). Bangladesh Agricultural University, Mymensingh, Bangladesh
- **B.Sc. Ag. (Agriculture, 1981).** Bangladesh Agricultural University, Mymensingh, Bangladesh

### MOST RECENT POSITION

**Lab Analyst:** February 2020 to March 2020, Convergence Laboratories, 675 Aviation Blvd, Suite A, Santa Rosa, CA 95403.

**Senior Research Scientist:** September 2016 to May 2018, Ajwa Analytical Laboratory, 8100 Arroyo Circle, Gilroy, CA 95020.

Senior Research Scientist (Contract work): March 2015 to May 2015, Ajwa Analytical Lab, 1415 Moffett St, #C, Salinas, CA 93905.

**Visiting Project Scientist:** May 2013 to January 2014, University of California-Davis, USDA-ARS Research Station, 1636 E Alisal Street, Salinas, CA 93905, USA.

**Director, Environmental & Regulatory Affairs,** February 2012 to February 2013, Western Plant Health Association, Sacramento, CA 95834, USA.

**Staff Research Associate:** April 2010 to September 2011 & January 2012 to February 2012, University of California-Davis, USDA-ARS Research Station, 1636 E Alisal Street, Salinas, CA 93905, USA.

Chemist (Part time): September 2008 to February 2009 & October 2009 to December 2009. ISCA Technologies Inc., 1230 Spring St, Riverside, CA 92507, USA.

**Staff Research Associate:** March 2007 to May 2007, University of California-Davis, USDA-ARS Research Station, 1636 E Alisal Street, Salinas, CA 93905, USA.

Chemist: May 2006 to Dec 2006, California Department of Food and Agriculture, Centre for Analytical Chemistry, 169 East Liberty Ave, Anaheim, CA 92801, USA.

- **Postdoctoral Research Associate:** March 2005 to October 2005, University of California-Riverside, USDA-ARS Salinity Laboratory, 450 W. Big Springs Rd, Riverside, CA 92507, USA.
- **Postdoctoral Research Associate:** August 2002 to February 2005, University of California-Davis, USDA-ARS Research Station, 1636 E Alisal Street, Salinas, CA 93905, USA.

## **WORK AND RESEARCH EXPERIENCE**

**Lab Analyst:** (February 2020 to March 2020): 40h/w, \$6666/month

- Identification of Cannabinoid in plants, food, beverage and different consumer products.
- Method development, validation and quality control of Cannabinoid, terpene, residual solvents, pesticide residue, mycotoxin and metals for flower, food, beverage and consumer products.

Senior Research Scientist (September 2016 to May 2018): 40h/w, \$6000/month

- Study of new chemicals according to OECD guideline for environmental fate, N transformation, carbon dioxide transformation and eco- toxicology.
- Method development and validation, conduct product chemistry studies.
- Study of environmental fate, metabolites and persistence of methyl bromide alternate soil fumigants.

**Senior Research Scientist (Contract work)** (March 2015 to May 2015): 40h/w, \$7500/month

- Study of new chemicals according to OECD guideline for environmental fate, N transformation, carbon dioxide transformation and eco- toxicology.
- Method development and validation, conduct product chemistry studies.

# Visiting Project Scientist (May, 2013 to January 2014): 40 h/w, \$4720/month

- Study of environmental fate, metabolites and persistence of methyl bromide alternate soil fumigants.
- Reducing emission of volatile organic compounds from soil fumigants.
- Determination of active ingredient of fumigants in different phases (soil, air and water).

# **Director, Environmental & Regulatory Affairs:** February 2012 to February 2013 40 h/w, \$7083/month

- Engage in Environmental and Regulatory affairs.
- Effectively communicate industry issues.
- Facilitate member and industry relations
- Analysis and review of different state agencies (CDPR, SWRCB, CDFA, Cal/EPA) reports.
- Report writing and review of periodicals.
- Facilitate different working group meeting and arrange conference.
- Co-ordinate works with other state departments and agencies.
- Report and comment writing on different environmental and regulatory issue.

**Staff Research Associate:** (April 2010 to September 2011 & January 2012 to February 2012), 40 h/w, \$4735/month

- Study of environmental fate, metabolites and persistence of methyl bromide alternate soil fumigants.
- Reducing emission of volatile organic compounds from soil fumigants.
- Determination of active ingredient of fumigants in different phases (soil, air and water).

**Chemist** (September 2008 to February 2009: October 2009 to December 2009), 15-25 h/w, hourly rate \$14.75:

- Performed synthetically manufacture of insect semiochemicals (pheromones).
- Assist in sample preparation and extraction, clean up and analysis.

**Staff Research Associate** (March 2007, to May, 2007), 40 h/w, \$3045/month:

To compile and analyze research data from previous experiments on methyl bromide alternatives and prepare manuscripts suitable for publication in peer reviewed journals.

**Chemist** (May, 2006 to December 2006), 40 h/w, 4410/month:

- Perform pesticide residue analysis in fresh fruits and vegetables, agricultural commodities, soil and plant materials.
- Sample preparation, sample extraction, clean up and instrumental analysis.
- Analysis, review of data, report writing, and review of periodicals.
- Co-ordinate works with other departments and agencies.

Postdoctoral Research Associate (August, 2002 to October 2005), 40 h/w, \$2801/month:

- Study of environmental fate, metabolites and persistence of methyl bromide alternate soil fumigants.
- Reducing emission of volatile organic compounds from soil fumigants.
- Evaluation of the phase partition (air-water and soil-water) and transformation of different soil fumigants in soil and water.
- Investigation of the volatilization potential of different types of fumigants when applied via subsurface drip as compared with a conventional shank injection.
- Determination of active ingredient of fumigants in different phases (soil, air and water).
- Examine the methods of application of different soil fumigants under different irrigation system.

**Postgraduate Researcher** (March, 2000- November 2001). Soil and Earth Science Group, Institute of Natural Resource Sciences, Massey University, New Zealand:

- Sequestration of metals (arsenic, cadmium, nickel and copper) by using living earth (Roturoa Volcano Soil) and bio-solids (compost) in contaminated soil.
- Phytoremidiation of metal by using different metal accumulator plants (Alysum species and mustard).
- Determination of metal levels in dairy shed effluents.
- Examine the availability of nutrients in different sources of effluent.

**Research Assistant** (September, 1996- November 2001). Soil and Earth Science Group, Institute of Natural Resource Sciences, Massey University, New Zealand. Research involved:

- General duties including set-up of laboratory experiments, field experiment and analysis of different nutrients in soil and plant, data analyses and interpretation.
- Research relating to the reactions of copper in soils, the amelioration of copper deficiency in pasture soils and sustainable management of soil resources.
- Study on the effect of zinc and copper fertilizer application on zinc, copper and cadmium concentration in mixed pasture.
- Comparison of the nickel acquisition in the rhizosphere of the nickel hyper accumulator with the excluder.
- Movement of nutrients and pollutants into ground water.
- Supervised field experiments; monitored environmental and ecological site conditions including weather, plant and soil quality.
- Management of pesticide, herbicide and their chemistry and physiology.

**Chemist** (November 1986 - March 1995). Plant Protection Wing, Department of Agricultural Extension, Ministry of Agriculture, Bangladesh. Research and work involved:

- Assist to administer pesticide ordinance' 1971 and pesticide rules' 1985.
- Chemical analysis of pesticides for pesticide administration, quality control, and registration.

- Pesticide residue analysis from plant and soil, and food commodities.
- Development of different formulations of pesticide in local carrier materials.
- Visit to different pesticide formulation and repackaging factories for collection of pesticide samples for routine analysis.
- Conduct training of field officers on National pesticides rules and regulation and International code of conduct on the distribution and use of pesticides and its technical guidelines.
- Assist to the department for harmonization of registration of pesticides and its information systems.
- Take care and maintenance of different scientific instruments like GLC, UVspectrophotometer.

**Subject Matter Officer-agriculture extension** (December 1984 - November 1986). Field Service Wing, Department of Agricultural Extension, Ministry of Agriculture, Bangladesh. Research and work involved:

- Conduct training of field workers fortnightly.
- Utilization of crop by-products, crop rotation and agro-forestry.
- Formulate Extension Recommendations (Impact points).
- Conduct multi location testing, demonstration of different crops.
- Supervision of IPM blocks and performs pest and disease surveillance.
- Supervision of horticultural nursery.
- Co-ordinate works with other departments and agencies (CARE).

**Scientific Officer** (November 1983 - December 1984). Department of Soil Science, Bangladesh Agricultural University, Mymensingh, Bangladesh. Research and work involved:

- Conduct field experiment of pulse crop on various aspects (nutrient, water, weed and pest management) in different areas in Bangladesh.
- To coordinate trials on varietals performance of leguminous crops.
- Collection of pulse crop, isolation and culture of *Rhizobium* bacteria in the laboratory.
- Analysis and report writing.
- Study on the effect of sulphur and zinc fertilizer on BR 4 rice.

### **TEACHING EXPERIENCE**

**Teaching Assistant-part time** (March, 1995 -November 2001). Massey University, Palmerston North, New Zealand. Duties included:

- Teaching undergraduate courses on:
- Principles of Soil Science, Soil Fertility and Fertilizers, Soil Chemistry

# General teaching duties: • Facilitated tutorin

- Facilitated tutoring sessions, provided supervision of laboratory sessions, assisted in preparation of course materials, prepared laboratory media and evaluated student reports for the courses.
- Assist visiting scientist form different country.

# **UNDERSTANDING OF RESEARCH METHODOLOGY AND TECHNIQUES**

I have gained extensive experience in the development and application of laboratory, glass house and field methods to determine the limitations imposed by substrate to plant growth. With my current work and as part of my thesis work during MSc(Ag), MApplSci and PhD studies, and during my tenure as scientific officer and chemist, I used different technique and design of experiments. I have gained technique in collection of soil, gas, plant, water and other food commodities samples for physical and chemical analysis from my present and past work. I have used the following analytical techniques and instruments in my present research and for my previous works.

- TLC, HPLC, GLC and UV-spectrophotometer: Used for measurement of active ingredient of pesticides.
- Atomic absorption/emission spectrophotometer: Used GBC AA for the measurement of various cations in soils, plants and fertilizer samples.
- Inductively Coupled Plasma (ICP) analyzer: Used for analysis of Cd, Cu and Zn in plant and soil samples.

# **CAREER DEVELOPMENT**

From	То	Institution/Organization	Main Subject (s)		
February 1,	April 30,	Central Plant Protection Training	Pesticide residue analysis.		
1993	1993	Institute, Hyderabad, India.			
November 5, 1990	January 3, 1991	Central Extension Resources Development Institute (CERDI).	Rules and Regulations of Govt. official and International affairs.		
July 24,	August 22,	Plant Protection Wing, DAE,	Packaging, storage and handling of pesticides.		
1990	1990	Dhaka through UNIDO.			
May, 1988	June, 1988	United Nations Industrial Development Organization. German Democratic Republic.	Pesticides formulation, quality control techniques, specifications and methods of pesticide analysis.		
March 1,	April 22,	Plant Protection Wing, DAE,	Pesticides formulation, quality control techniques, specifications and methods of pesticide analysis and use of related scientific equipments.		
1987	1987	Dhaka through FAO.			
September	October 2,	Rural Development Academy,	Irrigation Engineering, Irrigation		
6, 1986	1986	Bogra.	Agronomy		
November	November	Bangladesh Agricultural	Crop Production Technology.		
9, 1985	21, 1985	Research Institute, Gazipur.			
February 9, 1985	March 19, 1985	Academy for Planning and Development, Dhaka.	Management and Development.		
January 12, 1985	February 6, 1985	Central Extension Resources Development Institute (CERDI).	Office Management, Administration and Agricultural Development.		
May 2,	May 7,	Graduate Training Institute,	Report Writing, Agril. Journalism and Communication.		
1984	1984	Mymensingh.			
January 9,	January 18,	Graduate Training Institute,	Administration, Office Management and Communication		
1983	1983	Mymensingh.			

#### **AWARDS AND SCHOLARSHIPS**

- Awarded the Helen E Akers and Johannes August Anderson Scholarships for Master in Applied Science and Ph D program (1996-2001).
- Awarded the Summit Quinphos Bursary '99 by New Zealand Society of Soil Science.

### **AFFILIATIONS**

- a. Member, American Association for the Advancement of Science.
- b. Member, Soil Science Society of America.
- c. Member, New Zealand Society of Soil Science.
- d. Life member, Bangladesh Kris ibid (Agriculturist) Institution.

# **LEADERSHIP ACTIVITIES**

# To my profession

• I was elected as executive committee member of Bangladesh Agriculturist Institution, Bangladesh, Bangladesh Agricultural University local chapter (1984-85) and Bangladesh Agricultural Extension Association (1987-88).

# To the local community

- · Executive Committee member of Manawatu Bengali Association, Palmerston North, New Zealand (1995-2001).
- Founder member of Bangladesh Agricultural University Science Club (1983).
- I was a general member of Bangladesh Jaycees.

#### To the Government

- Nominated member of Fertilizer standardization sub-committee, Bangladesh Standard and Testing Institution, Dhaka, Bangladesh (1993-95).
- · Nominated member of Pesticide standardization sub-committee, Bangladesh Standard and Testing Institution, Bangladesh (1992-95).
- · Nominated member of Syllabus reform committee, Department of Agricultural Chemistry, Bangladesh Agricultural University, Mymensingh (1994-95).

#### GRANTS

- Ajwa, H.A., S. Sharmasarkar and A.R. Khan. Amvac Chemical Corporation, California: Generation and Degradation of MITC in Temporally Variable 3-Phase Soil Systems. \$90,000 (2002-'04).
- N. S. Bolan and A.R. Khan. Mankind Trading Corporation, New Zealand. Amelioration of Cu deficiency in pasture soil. NZ\$ 7000 (1997), Massey University Agricultural Foundation, NZ\$ 5000 (1998).
- At Massey University I have been successful in obtaining funds from graduate research fund (GRF) to attend in different conference.

# JOB RELATED SKILLS ○ Other languages: Bengali and German. ☐ Computer: Word processing, spreadsheet, power point presentation, graphic and statistical. ☐ Equipment: AAS, GC, GC-MS, HPLC, LC-MS/MS, Lachet, IC, N Analyzer and ICP-MS.

# LIST OF PUBLICATIONS Articles EDN (Ethanedinitrile) degradation in soil after application under TIF. In proceeding of Methyl Bromide Alternate Annual Meetings at San Diego, California, November, 2017. rumigant emission reductions with 11r warrant regulatory changes. 2013. California Agriculture, 67 (3):147-152. Chloropicrin and 1, 3-Dichloropropene field flux studies. In proceeding of Methyl Bromide Alternate Annual Meetings at San Diego, California, October 31- November 2, 2011 Airborne flux as a function of time of tarp cutting for Chloropicrin and I, 3-dichloropropene. In proceeding of Methyl Bromide Alternate Annual Meetings at San Diego, California, October 31- November 2, 2011. 2010. Chloropicrin emissions reduction by using totally impermeable film. In Proceedings of Methyl Bromide Alternate Annual Meetings, Orlando, Florida. Pp. 13-2, November 1-5, 2010. and 2008. Behavior of Methyl Isothiocyanate in soil after application of Metam sodium and metam potassium. In Proceedings of Methyl Bromide Alternate Annual Meetings, Orlando, Florida. Pp. 112-5, November 11-14, 2008.

. 2007. Seasonal response of copper availability through freshly applied fertilisers in pasture soil. Progressing for submission.
. 2007. Effect of nitrogen fertilizer, lime and
EDTA on the availability of residual copper. <i>Plant and Soil</i> . Progressing for submission  . 2007. Distribution and plant availability of
copper from added fertilizers in pasture soils. <i>Plant and Soil</i> . Progressing for submission
2005. Adsorption and Desorption of Copper in Pasture Soils. Communications in Soil Science and Plant Analysis. 36:2461-2487.
. 2005. Soil test to predict the copper availability in pasture soils. Communications in Soil Science and Plant Analysis. 36:2601-2624.  , H. A. Ajwa and C. Duerksen. 2005. Behavior of MITC
in soil after application of Metam sodium and Metam potassium. In Proceeding of Methyl Bromide Alternate Annual Meetings at San Diego, California, October 31-November 3, 2005.
. 2003. Adsorption, complexation and phytoavailability of copper as influenced by organic manure. <i>Environmental Toxicology and Chemistry</i> . 22:450-56.
. 2003. Distribution and bloavailability of copper in farm effluent. <i>The Science of Total Environment</i> . 309:225-236.
2001. Copper in farm
effluents. In Proceedings of Land Treatment Collective Workshop. Invercargill, New Zealand. Pp. 31-36, 7-9 March 2001.
2000. Enhancing the residual effectiveness of copper fertilizers in pasture soils. <i>In Proceedings of Australian and New Zealand Second Joint Soils Conference</i> , Lincoln University, Canterbury, New Zealand, pp. III-107-108, 3-8 December 2000.
2000. Seasonal variation of Cu availability in pasture. <i>In Proceedings of 13<sup>th</sup> Annual Workshop</i> , Fertilizer and Lime Research Centre, Massey University, Palmerston North, New Zealand. Pp.171-186.  2000. Effect of liming and nitrogen fertilizer on
the plant availability of residual Cu in pasture soils. In Proceedings of the Second International Conference on Geospatial Information in Agriculture and Forestry, Lake Buena Vista, FL, USA, pp. II-266-274, 10-12 January 2000.
1999. Concentrating on copper. <i>Dairy Exporter</i> . 74:106.  . 1999. Surface charge
effects of inorganic anions in relation to the adsorption and leaching of cadmium. Australian Journal of Soil Research. 37:445-60.
. 1998. Reaction and plant availability of Cu in pasture soils. <i>In Proceedings of the Annual Conference of New Zealand Society of Soil Science</i> , Gisborne. Pp. 39-40.
. 1997. Simultaneous retention of cadmium and
phosphate by variable charge soils. New Zealand Soil News. 45(3):98-101.  . 1996. The
influence of zinc and copper fertilizer application on zinc, copper and cadmium concentration in mixed pasture. In Proceedings of the Conference of Joint ICP and New Zealand Trace Elements Groups. Le Grand Hotel, Hamilton. Pp. 87-96.
. 1996. Phosphate induced cadmium retention by soils. <i>In Proceedings of the Conference of Joint ICP and New Zealand Trace Elements Groups</i> . Le Grand Hotel, Hamilton. Pp. 97-103.
1987. Performance of some Khizobium inoculants on grass pea (Lathyrus sativus L.). Bangladesh Journal of
Agricultural Science. 14(2):77-85.

## List of abstracts

- 2005. Effect previous application of metam sodium on the generation and degradation of methyl isothiocyanate in soil. Presented in ASA-CSSA-SSSA Annual Meetings at Salt Lake City, Utah, November 6-10, 2005.
- 2. 2005. Adsorption and Transformation of Chloropicrin as Affected by Surfactants. Presented in ASA-CSSA-SSSA Annual Meetings at Salt Lake City, Utah, November 6-10, 2005.
- 3. 2004. Factors Controlling Generation and Degradation of Methyl Isothiocyanate (MITC) in Soils. Presented in ASA-CSSA-SSSA Annual Meetings at Seattle, Washington, October 31- November 3, 2004.
- 4. Strawberry yield with chloropicrin and in line in combination with metam sodium and VIF. Presented in Methyl Bromide Alternate Annual Meetings at Orlando, Florida, October 31- November 3, 2004.
- 5. (MITC) in three phase soil systems. Presented in ASA-CSSA-SSSA Annual Meetings Denver, Colorado, 2-6 November 2003.
- 7. 1999. Seasonal influence on the response of pasture to fresh application of copper fertilizers. 2nd postgraduate colloquium, Institute of Natural Resources, Massey University, Palmerston North.
  - Mackay. 1999. Effect of liming and nitrogen fertilizer on the plant availability of residual Cu in pasture soils. New Zealand Institute of Agricultural and Horticultural Science Convention '99, Massey University, Albany, Auckland.
- 9. 1998. The chemical forms of Cu in various soil test extractants. Inaugural postgraduate colloquium, Institute of Natural Resources, Massey University, Palmerston North.
- Tillman. 1996. The influence of zinc and copper fertilizer application on zinc, copper and cadmium concentration in mixed pasture. New Zealand Institute of Agricultural Science Convention. Ruakura, Hamilton, New Zealand.
- 11. 1994. Residues of Fluvalinate in Okra (*Abelmoschus esculentus* L.). Eighth TUPAC International Congress of Pesticide Chemistry, Washington DC, USA.
- 12. 1985. Effect of sulphur and zinc fertilizers on BR 4 rice (*Oryza sativa* L.). Annual Conference of Bangladesh Association for the Advancement of Science.
- 13. 1985. Effect of *Rhizobium* inoculation on four varieties of blackgram (*Vigna mungo* L).
- 14. 1985. Effect of different strains of *Rhizobium leguminosarum* on three varieties of grass pea (*Lathyrus sativus* L).
- 15. Effectivity test of different strains of *Rhizobium* on blackgram (*Vigna mungo* L).

[No 13-15 in Annual conference of Bangladesh Society of Microbiologist (1985)].

## List of reports

- Protocol: Determine emission reduction using totally impermeable film and waiting period for tarp cutting in a large field fumigation trial. Study No. HA2011A Sponsored by USDA-ARS Area-Wide Pest Management Program for Methyl Bromide Alternatives, the California EPA (DPR), and TriCal, Inc.
- Monitoring of Iodomethane Emissions from Drip Applications under virtually and Totally Impermeable Films. Arysta Life Science, North Carolina, USA.
- 2004. Generation and degradation of Methyl isothiocyanate (MITC) in three phase soil systems. Amvac Chemical Corporation, California, USA.
- 1998. Copper Fertilizer Project. Fertilizer and Lime Research Institute, Massey University, Palmerston North, New Zealand. Submitted to Mankind Trading Company, New Zealand.
- 1996. Effectiveness of Cu topdressing in terms of increased plant uptake. Fertilizer and Lime Research Institute, Massey University, Palmerston North, New Zealand. Submitted to Ravensdown Fertilizer Company, New Zealand.
- Bangladesh. Annual report of Bangladesh Standard and Testing Institute, Dhaka, Bangladesh.
- 1993. The necessity of pesticide residue analysis from different commodities in Bangladesh. Regional pesticide residue analysis course. Submitted to Central Plant Protection Training Institute, Hyderabad, India.
- 1988. Development of pesticide industry and use of pesticides in Bangladesh. Submitted to Interregional training course in pesticide formulation. United Nations Industrial Development Organization. German Democratic Republic.
- 1985. Annual report on the project "Coordinated Scheme for the Improvement of Mashkalai and Khesari-Nodulation and Nitrogen Fixation Section". BARC, Dhaka, Bangladesh.

Press Release							
	(1998).	Mankind	hails	breakthrough.	Waikato	Farmers,	New
/ealand							



### POSITION APPLYING FOR:

Life Scientist/ General Engineer/ Physical Scientist GS 12- 13 CIN-ZX-ODH-2022-0017 Region 10, Water Division

# PERSONAL INFORMATION:

Citizenship: USA

# QUALIFICATIONS SUMMARY:

- KNOWLEDGE OF PROFFESIONAL PHYSICAL SCIENCE AND/OR LIFE SCIENCE CONCEPTS, PRINCIPLES, AND PRACTICES (E.G., CHEMISTRY, HYDROLOGY, BIOLOGY, GEOLOGY, ETC.) AS THEY APPLY TO PESTICIDE PROGRAMS: Coordinates and monitors environmental testing activities related to water quality and the application of pesticide s directly into the waters of the United States in order to control pest. Reviews data reports of discharges from wat ertransfers that conveys or connects to industrial complexes, treatment plants, and reservoirs, tributaries and distributions systems. Identifies any eminent biological, chemical or physical health risk that creates a public health concern. Makes sound decisions on providing adequate notification to the public regarding health thr eats and determining a plan of action to eliminate the risk by documenting all activities in detail and provides t echnical guidanceto restore operations back to normal activities. Ensures a thorough review of each even t to improve work practices, process controls and training.
- KNOWLEDGE OF APPLICABLE ENVIRONMENTAL LAWS, REGULATIONS, STATUTES, PESTICIDE POLICIES AND GUIDELINES
  SUFFICIENT TO PREPARE DOCUMENTS, PROVIDE TECHNICAL ASSISTANCE, DEVELOP BEST PRACTICES:
  Assists the engineering and regulatory directors with the assessment of the safety profiles of environmental testing
  protocols, results and permits related to industrial complexes, treatment plants, reservoirs, tributaries, and distribution
  systems. Involved in planning, report writing, reviewing scientific studies and presenting results to department
  directors, senior managers. In addition, assisting the Safety officer with implementation of the chemical hygiene plan to
  ensure a safe workplace environment is present, according to; the Occupational Hazardous Administration
  (OSHA) standard related to 29 CFR 1910 for Occupational Exposure to Hazardous Chemical. Ensures that all
  staff is aware of the adverse health effects for the chemical and biological agents they are working with by supplying
  and updating the safety data sheet (SDS) database.
- ABILITY TO WORK EFFECTIVELY AS A TEAM MEMBER, COORDINATING EFFECTIVELY WITH PEERS AND SUPERIORS AND COLLABORATING ON PROJECTS:
  - Serves as the project lead working with multi-disciplinary teams, developing the scope, budget and schedule as the technical lead on environmental assessment projects involving wastewater and drinking water management. Ensure sthat cost, schedule and work scope are clearly defined and approved by project sponsors before the project begins.
- SKILL IN USING DATA GATHERING AND ANALYSIS TECHNIQUES TO COLLECT AND REVIEW TECHNICAL INFORMATION ON ENVIRONMENTAL ACTIVITIES AND TO IDENTIFY AND SOLVE PROBLEMS:
  - Serves as the project lead on gathering all of the information associated with the possible risk exposur e from municipal operations. Evaluating the magnitude of the adverse effects of long-term exposure vs short-te rm exposure to theenvironment. Creates a descriptive matrix chart associated with the risk to display any con trol measures that are

available to control the associated risk and how to eliminate it. Uses information from the risk assessment to notify sponsors of key points about the risk.

ABILITY TO COMMUNICATE EFFECTIVELY IN WRITING TO PREPARE TECHNICAL REPORTS AND LETTERS:

Authors and reviews SOPs for complex environmental methodologies for internal use. Designs and prepares routine reports of generated data for environmental projects. Maintains complete records of compliance and communications via a memorandum of record. Updates project sponsors on any deviation from project scope and conformance to regulatory requirements.

 KNOWLEDGE OF APPLYING A WIDE RANGE OF CONCEPTS, PRINCIPLES, PRACTICES, AND METHODOLOGY OF THE FIELD BIOLOGICAL AND PHYSICAL SCIENCES SUFFICIENT TO DEVELOP, EVALUATE EXISTING AND NEW STUDIES REQUIRING AN INNOVATIVE APPROACH TO RESOLVE NEW PROBLEMS:

Serves as the lead technical resource for new protocol developments and study designs related to new government regulatory requirements. Ensures that project sponsors are aware of the new ways to implement testing activities for compliance. Reviews technical publications for new method updates related to environmental testing requirements and protocols.

KNOWLEDGE AND TECHNICAL EXPERTISE IN VARIOUS ASPECTS OF THE PESTICIDE PROGRAMS:

Responsible for interpreting, reviewing and articulating scientific report data related to pollution spills involving the effluent out fall locations, industrial complexes, treatment plants, reservoirs, tributaries, and distribution systems. Evaluates complex reports for anomalies related to compliance requirements set by the federal, state and local regulatory agencies. Reviews, data related GC/MS readouts, ICP/MS readouts, inorganic and microbial generated data from analyst and previous scientific studies.

ABILITY TO COMMUNICATE EFFECTIVELY ORALLY TO MAKE PRESENTATIONS TO VARIOUS TYPES OF AUDIENCES:

Presents data findings from scientific studies, report writing, and communicates conclusions in a way that clarifies the information so that project sponsors can make sound decisions on process improvement changes. Develops and presents new training protocols for process improvement related to environmental program activities.

### ACADEMIC EDUCATION & HONORS:

- MBA (Master of Business Administration). (May 2016), Northwood University, Midland, MI. Major: Business Administration (36 semester hours, GPA 3.6 on a 4.00 scale)
- Bachelors of Science (Biology). (May 2006), Southern University A&M College, Baton Rouge, LA. Major: Biology (138 semester hours, GPA 3.6 on a 4.00 scale)

# **EMPLOYMENT HISTORY:**

City of Fort Worth

Strategic Operations and Regulatory Division 200 Texas Street, Fort Worth, TX 76102

May Contact my Supervisor: Lissamma Xavier, Phone: 817-392-5903

Quality Control Specialist March 2010 – Present 40 Hours/Week \$71,003.72/year

#### Duties:

- Develops and reviews administrative policies to monitor pesticide applications for water transfer activities.
- Responds to public inquiries from various federal, state and local agencies and the public regarding technical guidance on environmental program regulations.
- Provides technical guidance on applicable laws related to SDWA, CWA, NPDES etc.
- Presents findings based on sound peer reviewed science orally.
- Monitors discrete conveyances for permit compliance activities for industrial and municipal facilities.
- Establishes and maintains effective working relationships.

# Accomplishments:

- Served as a key contributing member to the leadership team in the Strategic Operations and Regulatory Division.
- Led subcontractor meetings to convey project requirements, scope, milestones and regulatory compliance.

Nestlé Waters

Nestlé Waters North America 4718 Mountain Creek Pkwy, Dallas, TX 75236 May Contact my Supervisor: N/A, Phone: N/A Quality Assurance Supervisor April 2009 – September 2009 40 Hours/Week \$41,518.80/year

#### Duties:

- Managed new product launches with detailed quality audits to ensure compliance within the FDA standards
- Provided operational leadership to quality assurance specialist.
- Reviewed direct reports performance in a one on one consultation during annual performance reviews.

## Accomplishments:

- Managed supplier audits and compliance via continuous improvement methodology, improved deficiencies by 10%.
- Provided operational and strategic leadership to direct reports during new product launches.
- Improved the functional department's fiscal responsibility by ensuring that financial resources were properly deployed to execute strategic initiatives.

PepsiCo

Nestlé Waters North America 1000 113th St, Arlington, TX 76011

May Contact my Supervisor: Becky Michaels, Phone: 903-765-3527

**Quality Control Microbiologist** August 2006 – August 2008

40 Hours/Week \$45,676.80/year

#### Duties:

- Conducted microbial analysis, supporting the global quality services team.
- Defined procedures, standards, and systems to maintain 100% laboratory documentation compliance.
- Analyzed data trends and utilized findings to assess quality system status and identify areas for improvement.

## Accomplishments:

• Communicated 100% complex data clearly and concisely to tailor the message to the audience level.

### **JOB-RELATED CERTIFICATIONS:**

- IS-00100.a Introduction to the Incident Command System ICS-100, Emergency Management Institute, U.S. Department
  of Homeland Security (FEMA), United States, November 2010
- IS-00700.a National Incident Management System (NIMS) An introduction, Emergency Management Institute, U.S.
   Department of Homeland Security (FEMA), United States, November 2010
- Registered Environmental Manager (REM), National Registry of Environmental Professionals (NREP) #12525023807211005

# JOB-RELATED SKILLS:

Spanish: intermediate

Project management: Expert

Report writing: Expert Public Speaking: Expert

Research: Expert

Interpersonal Skills: Expert

**Environmental Regulations: Expert** 

Risk Management: Expert Quaity Assurance: Expert Budgeting: Expert Leadership: Expert

Resource Management: Expert

OSHA Standards: Expert

40 CFR: Expert

NPEDS permit: Expert

Process Improvement: Expert

Ability to properly handle and combine toxic and hazardous wastes and chemicals

Knowledge of intricate laboratory equipment and instrumentation utilized for biological or chemical testin

g. Knowledge of methods and procedures of physical, chemical and bacteriological testing

Able to use the following software: Microsoft Office 360 (PowerPoint, Word, Excel, Outlook, Access, Visio,

Project, Power Bi, Share Point) adept at using the Internet to conduct research. Adobe Acrobat, ArcGIS

products, and AutoCAD. Type approximately 60 words per minute.

# JOB-RELATED HONORS, AWARDS & SPECIAL ACCOMPLISHMENTS:

- Six Sigma Black belt
- Superior in Biology Award received as a freshman in High School

# **VOLUNTEER/COMMUNITY SERVICE AWARDS:**

Involved in Big Brothers Big Sister, which seeks to change the lives of children facing adversity for the better, forever. This organization operates in all communities across the United States - urban and rural, Big and Little. Serving as a mentor working with children in the community, in their schools, on military bases, and many places in between.

# PROFESSIONAL AFFILIATIONS:

- American Society of Quality (ASQ) (member, 2010 Present)
- Water Environmental Association of Texas (WEAT) (member, 2008 Present)
- National Black MBA Association (NBMBAA) (member, 2016 Present

Environmental Protection Agency
All Applicant Data Report

Announcement Number: CIN-ZX-ODH-2022-0017

Position Title: Life Scientist/General Engineer/Physical Scientist

Staging Area Number: SA-EPA-0001

Name:

MIDX: 000339689

United States Citizen: Y Veterans' Preference: CPS

Military Service Dates (Start of Service - End of Service):

10/01/2004 - 10/01/2008

Location(s) Applied to: Lacey, WA(US)

Series Applied To: 0401, 1301

# <u>Resume</u>

Country of Citizenship: United State

Country of Citizenship: United States

Veterans' Preference: 10-point preference based on a compensable service connected

disability of 30% or more (CPS)

Highest Grade: 12

Availability: Job Type: Permanent

Work Schedule: Full-time

Work Experience: U.S. Army JBLM DPW Environmental Division

07/2020 - Present 2012 Liggett Ave

Salary: \$105,140.00 USD Per Year Joint Base Lewis-McChord, WA 98433 US

Hours per week: 40

Series: 1301
Pay Plan: GS
Grade: 12

Supervisor: Meseret Ghebresllassie (253-477-3742)

Okay to contact this Supervisor: Yes

# Water Program Manager

-Manages and implements the JBLM Water Program in accordance with EPA issued National Pollutant Discharge and Elimination System (NPDES) Clean Water Act (CWA) permits and the Safe Drinking Water Act (SDWA) as well as compliance with federal, state, and local laws and regulations. -Spearheaded recurring environmental coordination meetings with regulators, American Water and utilities privatization team to resolve problems and ensure smooth transition of drinking water and wastewater system compliance and permit transfer amidst emerging contaminant regulatory changes. -Acting Installation Restoration Program Manager for JBLM, YTC, and sub-installations in support of Defense Environmental Restoration Account (DERA), Comprehensive Environmental Response Compensation and Liability Act (CERCLA), Resource and Conservation and Recovery Act (RCRA), Washington Surface Water Quality Standards, and Clean Water Act (CWA) programs during position vacancy (May-Aug 2021). -Develops scopes of work and performance work statements to

# Environmental Protection Agency All Applicant Data Report Name:

provide project criteria, goals, and general milestones for installation restoration, drinking water, and wastewater-pretreatment program tasks. -Meets regularly with governmental agencies and hired contractors to review deliverables and discuss project progress. -As Contract Officer's Representative (COR), performs contract oversight and quality control to include developing scopes of work, reviewing proposals, deliverables, and invoices, and evaluating contractor performance. -Engages with regulatory agencies to coordinate cleanup and compliance strategies and requirements associated with per- and polyfluoroalkyl substances (PFAS) and other contaminants. -Develops annual work plans, projects and programmatic budget for installation Water Program to include drinking water, wastewater, pretreatment, and stormwater. -Coordinated with USGS to create an interagency agreement for surface water quality monitoring on an impaired waterbody.

U.S. Army Yakima Training Center

12/2021 - 04/2022

970 Firing Center Road

Salary: \$111,129.00 USD Per Year

Yakima, WA 98901 US Hours per week: 40

Series: 1640 Pay Plan: GS Grade: 13

This a time-limited appointment or temporary promotion

Supervisor: John O'Brien (509-577-3477) Okay to contact this Supervisor: Yes

## Director, Public Works (Interim)

-Selected by leadership to be temporarily promoted and serve as Yakima Training Center's Interim Director of Public Works. -Administers all public works functions for Yakima Training Center to include infrastructure operation and maintenance, facility planning and engineering services, and environmental protection and compliance. - Reviews and approves annual work plans developed by subordinates and justifies and implements annual budget based upon directorate priorities and workload requirements. -Supervises employees and provides guidance, training opportunities and mentorship. -Plans, manages and responsible for the overall daily engineering, maintenance and repair of installation infrastructure and utilities and oversees environmental management, natural and cultural resource protection, and compliance programs. -Coordinates with key stakeholders to include USACE and installation directorates to review project plans, designs, and construction. Provides oversight of installation contracts and accepts or rejects work accomplished.

U.S. Army JBLM DPW Environmental Division

11/2015 - 07/2020 2012 Liggett Ave

Salary: \$94,832.00 USD Per Year

JBLM, WA 98433 US Hours per week: 40 Series: 1301

Pay Plan: GS Grade: 11

Supervisor: Cynthia Trout (253-966-1760) Okay to contact this Supervisor: Yes

#### Stormwater Program Manager

-Managed and implemented the JBLM Stormwater Program in accordance with EPA issued National Pollutant Discharge and Elimination System regulatory permits including the Municipal Separate Storm Sewer System (MS4) Permit, Multi-Sector General Permit, and Construction General Permit and compliance with federal, state, and local laws and regulations. -Identified permit-driven work requirements to include maintenance, repair and construction across the installation and initiated corrective actions to meet

# Environmental Protection Agency All Applicant Data Report Name:

compliance. -Developed an innovative approach to configure a model in the Air Program Information Management System (APIMS) automated environmental database to manage water program inspections and assessments, and created a monitoring tracker consistent with EPA's reporting system (NetDMR) to track monitoring requirements and conduct data analysis trending on stormwater monitoring laboratory results. -In coordination with IT and Public Affairs, published the JBLM Stormwater Management Plan on the JBLM public website and regularly updated program documents and local policies to incorporate regulatory changes and legal requirements. -Identified management gap in current practice requiring corrections to the real property inventory for stormwater assets and new Category Code identification to ensure Sustainment, Restoration and Maintenance funding is available for operation and maintenance of stormwater facilities. -Possesses working knowledge of JBLM safe drinking water and sanitary wastewater and pretreatment programs and became acting water program manager from April 2019-July 2020 during position vacancy. -Managed the Environmental Division analytical laboratory sampling contract to include Stormwater, Wastewater, Pretreatment, Biosolids, Drinking Water, Solid Waste, Air, TSCA, Hazardous Waste, and Installation Restoration monitoring requirements. -Met regularly with USACE and hired contractors to review deliverables and discuss project progress. -Maintained regular contact with EPA Region 10 permit administrators to discuss and interpret permit language and content clarification. Requested meetings and teleconferences to negotiate permit content to ensure better understanding of JBLM roles and responsibilities. -Established a highly praised MS4 quarterly update tracker for use during briefings for installation senior staff. The tracker is now utilized as a template for other organizational briefings as well as the base document for the JBLM MS4 annual report submitted to the EPA. -Conducted project reviews and recommended pollution and treatment control structures such as oil/water separators, bioswales, rain gardens, and membrane filtration devices to prevent the release of pollutants into the environment. -Coordinated with PW Geospatial Team to develop an ArcGIS platform to manage and track design and construction projects on a geospatial scale to meet MS4 Permit requirements. -Prepared and presented briefings for senior level staff and developed information papers to provide environmental updates and training resources for dissemination of information to tenant commands and support organizations across the installation. -Coordinated with EPA and state agencies to monitor changing environmental laws and regulations. -Developed and maintained program budget and annual work plans, and established program priorities and objectives for three water program areas: Stormwater, Drinking Water, and Wastewater-Pretreatment. -Regularly utilized automated management systems and databases, including EESOH-MIS, APIMS/EPIMS, AEWRS, TIERS, and ProjNET (Dr Checks) to document, track, and manage environmental compliance information.

U.S. Army Public Health Command Region-West

07/2011 - 11/2015 Building 9030

Salary: \$82,387.00 USD Per Year

5th Street and Blaine Ave.

Hours per week: 40

Series: 0690 Pay Plan: GS Grade: 12

Supervisor: Mark Lucas (253-966-0063) Okay to contact this Supervisor: Yes

Fort Lewis, WA 98433 US

### Industrial Hygienist

-Provided technical advice and support in the anticipation, identification, evaluation, control and management of environmental and occupational health hazards for Army installations within a 20 state region. -Lead project officer on technical surveys and program audits which entailed air quality and asbestos assessments, environmental and occupational health program evaluations and audits, oil water separator evaluations, hazardous and non-hazardous waste inspections, and noise, ventilation, and illumination

surveys. -Developed survey methodologies, utilized a wide variety of environmental sampling instrumentation to collect samples, and analyzed data using statistical analysis. -Conducted regular briefings, consultations, and training events for internal and external customers. -Wrote and reviewed technical reports that defined environmental and occupational health concerns and provided recommendations to control hazards and maintain compliance in accordance with federal, state, and local regulations to include OSHA and EPA. -Assisted with the development and maintenance of the division budget, annual work plans, project cost estimates, project proposals, and statements of work, and prioritized work plans and technical surveys to coincide with increased government budget and resource constraints. -Reviewed work plans, blue prints, operating procedures, equipment specifications, and contracts to ensure compliance with applicable standards. -Served as the only certified Arbinger facilitator and Spectrum Development trainer for an organization of approximately 500 employees, enhancing communication, professional relationships and collaboration of teams through development and execution of workshops and training events. -Established a cooperative working group with key personnel to develop and review Army-wide guidance documents that are consistent and harmonized for all Army agencies. -Member of Lean Six Sigma technical committee exploring efficacy of metric action plans and determining methods for command system improvements. -Hazard communication and chemical hygiene program manager for the organization. -Selected by commander to be the organizational civilian representative to identify and advocate civilian issues and concerns and serve as a liaison between civilian employees and the command team during organizational restructure and transition. -Recognized as USAPHC Employee of the Quarter in the professional and scientific category for First Quarter, Fiscal Year 2015.

Nisqually Indian Tribe 05/2014 - 07/2016 Natural Resources Department Salary: \$0.00 USD Without Compensation 12501 Yelm Highway SE Hours per week: 1 Olympia, WA 98513 US

#### Stream Steward Volunteer

-Staffed booths at community festivals and events (Nisqually Watershed Festival and Eatonville Salmon Fest) to elevate public awareness about the importance of protecting local habitat for endangered salmon species and other wildlife. -Attended Nisqually River Council meetings to enhance personal knowledge of the watershed and coordinate with other agencies on fish and wildlife management strategies and restoration efforts. -Experience collecting benthic macroinvertebrate samples to determine health of watershed, Nature Mapping of forests and riparian zones, sampling for water quality, conducting assessments of aquatic ecosystems, and restoring salmon habitat. -Working knowledge of Endangered Species Act and salmon recovery in the Nisqually watershed. -Participated in over 30 hours of classroom instruction on topics like rain gardens, estuary habitat, wildlife and endangered species, geology of Washington watersheds, old growth forests and environmental laws and regulations.

South Sound Estuary Association 04/2013 - 09/2013 PO Box 2182 Salary: \$0.00 USD Without Compensation Olympia, WA 98507 US

Hours per week: 2

#### Beach Naturalist Volunteer

-Developed skills in taxonomy of marine mammal, nudibranch, seaweed, phytoplankton, marine worms, salmon, and forage fish; identification of invasive, threatened and endangered species; and South Puget Sound tides and tidal zones. -Identified and surveyed diverse

species of flora and fauna within the South Sound Estuary and conducted community outreach for conservation and sustainment awareness at local Puget Sound beaches. -Demonstrated environmental models illustrating the hazards and environmental damages associated with stormwater runoff.

Baxter Healthcare Corporation 02/2009 - 09/2010

25212 Illinois Route 120

Salary: \$49,000.00 USD Per Year

Round Lake, IL 60073 US Hours per week: 40

Supervisor: Glenn Semple (224-948-2000) Okay to contact this Supervisor: Yes

#### Environmental Health and Safety Representative

-Managed hazardous and non-hazardous waste collection and storage for over 100 laboratories and interacted with disposal vendors for proper tracking, transportation and disposal of all waste in compliance with RCRA. -Member of the spill response and medical emergency response teams, participated in mock drills, and coordinated after action reviews to enhance and improve emergency management procedures and minimize environmental impacts. -Gathered, reviewed, and verified data for monthly, quarterly, and annual regulatory waste reports. -Initiated and maintained oversight of a long range habitat restoration project on a five-acre company easement consisting of delineation of wetlands and forested areas, classification of species, identification of species of concern, and population control and eradication plans for invasive plant species. -Co-facilitated the development and design of the computerized waste tracking system which allowed for consolidation and management of data and streamlining of reports. -Assisted in the development and maintenance of the company storm water pollution prevention plan to address sources of pollutants and sediments associated with manufacturing operations and construction activities, develop controls to mitigate pollutant discharges, and comply with requirements in NPDES stormwater permits. -Provided oversight for three contractors conducting collection, packing, transportation and disposal of biological, hazardous and non-hazardous wastes and provided quality assurance and quality control of deliverables to include review of technical writing and technical documents. -Conducted water sampling and analysis for organics, solids, nutrients, and physical properties in support of waste water treatment plant operations. -Maintained strong working knowledge of current environmental codes and regulations. -Conducted risk assessments, accident investigations, food safety inspections, and industrial hygiene monitoring. -Coordinated company environmental and occupational health outreach programs offering monthly educational activities to over 400 employees to include promotion of water and energy conservation, pollution prevention, and a healthy work environment. -Spearheaded and executed the Adopta-Highway volunteer program for the company. -Assisted in environmental program assessments and reviews and analyzed operating procedure effectiveness.

U.S. Army Center for Health Promotion and Preventive Med

04/2006 - 10/2008 1312 Cobb St. SW

Salary: \$52,000.00 USD Per Year Ft. McPherson, GA 30330 US

Hours per week: 40

Supervisor: MAJ Dereck Irminger (404-464-3318)

Okay to contact this Supervisor: Yes

### Environmental Scientist

-Selected by command to perform potable water quality assessments over a three month period on U.S. Army installations in Europe, write technical reports in compliance with international, U.S., and Army environmental regulations, and oversee the potable water program in absence of a program manager. -Led, managed, and executed field surveys in the

areas of environmental health engineering and industrial hygiene to include water quality and vulnerability, noise dosimetry, hazardous and non-hazardous waste management, pest management, ventilation, and air quality. -Interpreted and applied environmental policy, wrote technical reports outlining notices of violation and deficiencies and made recommendations for corrective actions to comply with regulations. -Utilized and maintained an array of environmental and occupational health sampling equipment to collect and analyze environmental samples. -Participated on hazardous materials and hazardous waste teams during Environmental Performance Assessment System (EPAS) audits of Army installations within the southwest region of the U.S. -Coordinated with federal, state, and local governments and industry to remain current on environmental issues and regulation updates pertaining to OSHA, EPA, CERCLA, and RCRA. -Designed and distributed organizational literature and pamphlets to promote company mission and generate an interest in environmental science within the local community. -Provided environmental consultations and training to Department of Defense personnel throughout the Southeastern region of the United States.

U.S. Army, A Co 168th Med BN

04/2005 - 04/2006

Camp Red Cloud

Salary: \$40,000.00 USD Per Year

Uijeongbu, KS Hours per week: 40

Supervisor: CPT Olegario Coss (315-732-7772)

Okay to contact this Supervisor: Yes

#### Health Service Manager

-Supervised and evaluated the performance of 21 health professionals in their performance and training. -Utilized GPS and GIS to designate ideal and alternate routes for ambulances to utilize during emergencies and developed training exercises for Soldiers while limiting environmental impacts. -Prepared work plans and developed and executed training activities based on unit objectives to include three weapons qualifications ranges, two land navigation exercises, and four emergency response/mass casualty training exercises. - Coordinated and maintained working relationships with the installation environmental office for training and land sustainment and assisted in the implementation of Army regulations and NEPA guidance to minimize our impact on the environment. -Taught bimonthly English classes to Korean nurses and doctors to help bridge the communication gap between United States patients and local Korean hospital staff. -Created and implemented equipment maintenance program which was easily incorporated into the training calendar without interfering with daily clinical operations. -Maintained serviceability and accountability of organizational equipment, vehicles, and office supplies valued at over \$3.6 million.

Education: Oregon State University

Corvallis, OR US

- 06/2017

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Major: Natural Resources

GPA: 3.90

Relevant Coursework, Licensures and Certifications:

Aquatic Biological Invasions, International Environmental Politics and Policy, Geographic Information Systems and Science, Mammal Conservation and Management, Mammalogy, Ornithology, Fish and Wildlife Law and Policy, Wetlands and Riparian Ecology, Social Aspects of Sustainable Natural Resources

University of Illinois at Springfield Springfield, IL US - 05/2010

Major: Public Health

GPA: 3.1

Relevant Coursework, Licensures and Certifications:

Environmental Toxicology, Biostatistics, Foundations of Epidemiology, and Environmental

and Occupational Health

Eastern Illinois University Charleston, IL US - 08/2004

167

Major: Environmental Biology

GPA: 3.39

Relevant Coursework, Licensures and Certifications:

General Biology, General Chemistry I with Lab, General Chemistry II with Lab, Animal Diversity, Botany, Organic Chemistry I with Lab I, Organic Chemistry II with Lab, Elementary Statistics, Animal Physiology, Environmental Life Science, Genetics, Entomology, Weather and Climate, Ecology, Environmental Politics, Physics I with Lab, Physics II with Lab, Parasitology, Organic Evolution, Quantitative Analysis, Biochemistry, Microbiology, Dendrology

Job Related Training: CERCLA Remediation Process, 2021. PFAS Workshop, 2019. WADOE Managing PFAS Contamination Training, 2019. Stormwater Permit Compliance Training, 2019. Risk Communication Course, 2019. Puget Sound Nutrient Forum, 2019. Municipal Construction Stormwater Site Inspection Toolkit Workshop, 2018. Water Quality Course, 2018. Stormwater Pollution Prevention Workshop, 2018. IMCOM Army Environmental Trends Course, 2018. Certified Erosion and Sediment Control Lead Training (WSDOT), 2018. Phase II and Stormwater Management Manual for Western Washington Revision Workshop, 2017. Nonpotable Water Reuse in Urban Environments, 2017. Utility Leader's Guide to Puget Sound Nutrient Management Strategies, 2017. Review of Development/Redevelopment Stormwater Site Plans, 2016. Introduction to Stormwater Management, 2015. Blueprint Reading and Design Review, 2015. Wastewater, Stormwater, and Spills Training, 2015. Arbinger Facilitator Training - Tacoma, WA, 2014.

Affiliations: Chambers-Clover Creek Watershed Council

Member

South Sound Phase II Coordinator's Group

Member

References: Jennifer Wu U.S. EPA Region 10

Environmental Engineer, NPDES Section

Phone Number: 206-553-6328

Email Address: Wu.Jennifer@epa.gov

Reference Type: Professional

Meseret Ghebresllassie

US Army

DPW-Environmental, Compliance Branch Chief

Phone Number: 253-477-3742

Email Address: meseret.c.ghebresllassie.civ@mail.mil

Reference Type: Professional

LTC Luke Wittmer

U.S. Army

YTC Installation Commander

Page 50 of 192

Phone Number: 931-237-7514

Email Address: luke.a.wittmer.mil@mail.mil

Reference Type: Professional

Tom Olsen U.S. Army

Chief, Operations and Maintenance Division, PW

Phone Number: 253-967-3239

Email Address: thomas.w.olsen.civ@mail.mil

Reference Type: Professional

Additional Information: -Over 15 years of experience working in the environmental and occupational health field. -Very organized and exceptional problem-solving skills. - Excellent written and oral communication and interpersonal skills. -Extremely flexible and able to successfully work in team-oriented settings as well as independently. -Familiarity working with project management software and databases to include Geographic Information Systems (GIS), Defense Occupational and Environmental Readiness System (DOEHRS), Air Program Information Management System (APIMS), Army Energy and Water Reporting System (AEWRS), the IMCOM Environmental Reporting System (tIERS), Enterprise Environmental, Safety, and Occupational Health Management Information System (EESOH-MIS), Network Discharge Monitoring Report (NetDMR), Central Data Exchange (CDX), and General Fund Enterprise Business System (GFEBS). -Proficient in Microsoft Office applications (Word, Powerpoint, Excel, etc).

Astute worker with an unwavering dedication to accuracy and precision in learning and training science. Skilled at collecting, securing, and analyzing different types of data. Excellent attention to detail combined with an orderly approach.

#### **EXPERIENCE**

08/23/2002 - 12/15/2002

## PHD. CANDIDATE, NORTH CAROLINA STATE UNIVERSITY DEPARTMENT OF CHEMISTRY

Maintained course attendance and grade records in accordance with Chemistry Department guidelines.

Clearly and fully understood the material to be covered in the lab session, how to handle it in the laboratory, and how it is related to the lectures.

Came prepared for each laboratory session. Returned graded quizzes, laboratory reports, and problem assignments at the next laboratory session. Graded accurately and fairly followed guidelines provided by supervising faculty member.

Available to students during laboratory periods and helped students with questions during the laboratory period.

Promptly relayed any problems encountered with the experiments or laboratory sessions to the supervising faculty member.

Laboratories clean and orderly at the end of each lab session. Reported equipment maintenance or room maintenance problems to the chemical stockroom personnel.

Complied with chemical hygiene and safety regulations established by the Department and outlined in the Chemical Hygiene and Safety Regulations for the Chemistry Department.

#### LAB TECHNICIAN, K-FLEX

Performed viscosity testing under low shear conditions to enable the measurement of zero-shear viscosity.

Determined viscosity profiles across a range of shear rates by observing zero-shear viscosity plateaus.

Verified the certification of measuring instrument calibration to traceable viscosity standards

10/21/2003 - 5/1/2005

#### ENTRY-LEVEL STAFF ENGINEER I, DELTA ENVIRONMENTAL, INC

Performed assignments requiring the application of standard techniques, procedures, and criteria to carry out engineering tasks

Developed judgment and understanding of professional and ethical responsibilities through assigned tasks

Exercised judgment limited to developing details of work in making preliminary selections and adaptations of engineering alternatives

Prepared engineering related calculations, design drawings, specifications, and visual aids

Assisted with fieldwork (e.g., groundwater and soil sampling, well installation, and contractor oversight)

Collected and entering data, and apply technical principles and theories

Interpreted and recorded data, conducted analyses, compared findings to relevant studies and local, state, and federal regulations to ensure compliance and draft reports based on observed conclusions and professional judgment

Operated and maintained remediation systems

Created designs, calculations, sketches, diagrams, schematic drawings, and final working drawings under the supervision of an experienced Engineer-Geologist

Collected and analyzed data under the supervision of an experienced Engineer-Geologist

Used computer software as a tool for solving basic engineering problems

Performed work in accordance with agreed-upon budget and schedule under supervision

5/15/2005 - 5/18/2011

#### STAFF ENGINEER, SCS ENGINEERS

Office and field activities, such as field meetings with the client and/or other SCS supervising engineering staff

Oversaw construction activities, collection of samples, etc., as well as office activities including engineering analysis

Prepared plans and specifications, reports, permit applications, and proposals as needed

6/3/2011 -9/24/2017

#### JUNIOR ENVIRONMENTAL ENGINEER, ARCADIS

Operated and maintained remediation systems (both water and vapor treatment systems)

Designed and oversaw system projects as well as system upgrades

Collected soil and groundwater samples

Characterized sites, conducted remedial design and feasibility studies

Compiled and evaluated data, and QA/QC

Wrote reports, permits, and cost estimates

Coordinated with project managers and senior engineering staff

Installed soil borings and groundwater monitoring wells

10/8/2017 - 1/5/2022

#### ENGINEER III, PLEXUS SCIENTIFIC

Collected and entered data, and prepared technical reports

Interpreted and recorded data, conducted research and analyses, compared findings to relevant studies and local, state and federal regulations

Supported field sampling, survey activities and environmental permit application preparations

Monitored construction activities for compliance with environmental plans, permits, and regulations

#### **EDUCATION**

05/18/2002 CHEMICAL ENGINEERING, NORTH CAROLINA STATE UNIVERSITY, BS

05/18/2023

CIVIL & ENVIRONMENTAL ENGINEERING, ILLINOIS INSTITUTE OF TECHNOLOGY, ME

### **CERTIFICATION(S)**

#### **ENGINEER-IN-TRAINING (E.I.T)**

### **SKILLS**

- Active Listening Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Critical Thinking Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- Operation Monitoring Watching gauges, dials, or other indicators to make sure a machine is working properly.

- Writing Communicating effectively in writing as appropriate for the needs of the audience.
- Complex Problem Solving Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
- Judgment and Decision Making -Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Announcement Number: CIN-ZX-ODH-2022-0017

Position Title: Life Scientist/General Engineer/Physical Scientist

Staging Area Number: SA-EPA-0001

Name:

MIDX: 002747576

United States Citizen: Y Veterans' Preference: NV

Military Service Dates (Start of Service - End of Service): Location(s) Applied to: Portland, OR(US); Seattle, WA(US)

Series Applied To: 0801, 1301

#### Resume

Country of Citizenship: United States

Highest Grade: 12

Availability: Job Type: Permanent

Telework

Work Schedule: Full-time

Desired locations: United StatesPortland

United StatesVancouver

Work Experience: DCMA LM Sunnyvale

08/2019 - Present

1111 Lockheed Martin Way

Salary: \$107,241.00 USD Per Year

Sunnyvale, CA 94089 US Hours per week: 40

Series: 0855 Pay Plan: GS Grade: 12

Supervisor: Dean Liensdorf (408-338-7865)

Okay to contact this Supervisor: Contact me first

#### Systems Engineer

• Monitors and evaluates contractors' and subcontractors' engineering systems and software, design, development, production, quality assurance, and test efforts in accordance with contract terms and policies. • Analyzes contractor performance data including systems engineering, software engineering, manufacturing engineering, supply chain management, industrial analysis, and earned value management (EVM) performance for trends, and provides pertinent data to the Lead Engineer and Program Integrator. • Assists the Lead Engineer with managing agency-level performance indicators, recommending corrective action, establishing lessons learned, and influencing the improvement of contractor processes. • Organizes and delivers technical inputs during briefings and presentations to leadership, in order to encourage understanding and acceptance of findings, and to recommended resolutions to any potential issues. • Conducts Contract

Receipt and Review (CRR) on ACAT I projects relating to contract cost, schedule, and performance for DCMA and the program office. • Works with other functional areas to develop and maintain a multi-functional surveillance plan in order to consolidate efforts in the monitoring and reporting of contractor activities. • Maintains consistent communication with various Functional Specialists and provides technical advice as needed. · Assists with PDREP surveillance plan development and implementation for DCMA LM Sunnyvale engineers, and provides technical feedback to Western Region and Headquarters about potential improvements and pitfalls. • Participates in a surveillance record working group to determine the requirements of the latest policies, develop plans to streamline the processes, standardize the documentation and record-keeping across the various functional areas, and reduce redundancies and any duplicated efforts. • Assists the Lead Engineer with responses to inquiries, findings, and agency recommendations during the Technical Program Management Evaluation (TPME), self-assessments, and other internal audits. • Currently the Technical Support for Negotiations (TSN) Coordinator and technical expert for DCMA LM Sunnyvale. Leads the efforts of a small group to perform technical support and analysis of contracts, which includes verifying and validating estimated hours & cost of a given contract, whether or not the work to be performed can be completed in the time provided, and if the supporting documentation is consistent throughout the documents provided in the contract request. Provides TSN support to other Contract Management Offices (CMOs) as needed.

Robins AFB 09/2014 - 08/2019 285 Cochran St

Salary: \$78,000.00 USD Per Year

Robins AFB, GA 31098 US

Hours per week: 40

Series: 0830 Pay Plan: NH Grade: 03

Supervisor: Gary Foy (478-222-3170)

Okay to contact this Supervisor: Contact me first

#### Technical Data Engineer

• Used computer software such as computer-aided design (CAD) programs and project tracking programs to assist higher grade engineers in solving engineering problems and to promote technical excellence. • Reviewed over 400 complex 3D models and corresponding data for various weapon systems each year. • Worked on a detailed spreadsheet listing the errors that needed to be fixed before any models could be accepted. • Assisted in coordinating projects with engineers in other disciplines and integrated product team members. • Worked with the team that sustains the Armament Teamcenter database and workflows to help develop and propose change criteria design to improve the efficiency and effectiveness of the database. • Worked towards uploading 2D and 3D Technical Data Packages (TDPs) into the Armament Teamcenter database and ensuring the data was linked appropriately. This helped to improve the way data was uploaded and retrieved, as well as increasing productivity and efficiency in finding and retrieving data. • Secret Clearance, Obtained Jan 2015

AFRL Commander's Challenge 2016 06/2016 - 12/2016

1864 4th St

Salary: \$0.00 USD Per Year

Wright-Patterson AFB, OH 45433 US

Hours per week: 40

Supervisor: Gary Foy (478-222-3170)

Okay to contact this Supervisor: Contact me first

#### Robins AFB Test Manager

• Researched and developed a preliminary system to detect, track, identify, and mitigate a

small unmanned aerial vehicles (sUAS) on or around a military installation. • Test Manager - created the Airworthiness, Test, and Safety Review Board (ATSRB) plans for a water cannon system, an octocopter, several RC planes, and a net gun. • Coordinated with several military bases for sUAS flight testing.

Education: Mercer University

Macon, GA US - 08/2019

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Major: Business Administration

GPA: 3.96

Relevant Coursework, Licensures and Certifications:

••• Collaborated and coordinated with a small team to interview fellow employees at Robins AFB on the hiring and retention of new employees and presented the findings and possible solutions not only to the class, but interested supervisors at Robins AFB. Additionally, performed financial and budget analyses on various large corporations, such as Sears and Starbucks. ••• Researched various job announcements and created a sample for an interdisciplinary engineer. Additionally, reviewed various legal cases and how they could be applicable to our current jobs and situations. ••• Researched, developed, and designed a concept, budget, and pricing strategy for the improvement of the flow of traffic onto a federal agency, such as Robins AFB, using the SWOT Analysis (Strengths, Weakness, Opportunities, and Threats). Additionally, reviewed and discussed the effects of supply chain management and how that applies to contractors and suppliers and their scope, budget, and delivery schedules.

University of Central Florida Orlando, FL US - 08/2014 143

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Major: Mechanical Engineering

GPA: 3.42

Job Related Training: Certifications: • APDP Engineering Level II Certification, 2016 • APDP Science & Technology Manager Level I Certification, 2019 DCMA Training: • ENGR 230 - Technical Support to Negotiations (TSNs), 2020 • ENGR 233 - Technical Support to Indirect Costs (TSIs), 2021 • PST 300 - Integrated Program Analysis, 2019 • T9001 & Deviations Training, 2019 • SYS 202 - Intermediate Systems, Planning, Research, Development, and Engineering, 2016 Leadership Courses: • Dealing With Difficult People, 2017 • Leading What It Means, 2017 • Listening Skills, 2017 • Motivation, 2017 • Situational Leadership, 2017 • Time Management, 2017

References: Tuan Nguyen

DCMA LM Sunnyvale Systems Engineer

Phone Number: 408-204-6023

Email Address: tuan.a.nguyen46.civ@mail.mil

Reference Type: Professional

Jodi Remeneski DCMA LM Sunnyvale

Deputy Program Integrator Phone Number: 408-756-4951

Email Address: jodi.l.remeneski.civ@mail.mil

Reference Type: Professional

Gary Foy

Robins AFB Supervisor

Phone Number: 478-222-3170

Email Address: gary.foy@us.af.mil

Reference Type: Professional

Chad Berdon Robins AFB

Engineer/PLM Architect
Phone Number: 478-327-2668

Email Address: chad.berdon@us.af.mil

Reference Type: Professional

Additional Information: Engineering Programs: Creo Parametric, SolidWorks, AutoCAD, NX; MathCAD, MATLAB, LabView Non-Engineering Programs: Microsoft Word, Excel, PowerPoint, Teams, Outlook; Zoom; Adobe Photoshop, Illustrator, Premiere; OpenShot Video Editor; OBS Studio

#### Summary

I have more than 25 years of experience in the environmental restoration and compliance fields. For the past 15 years, the majority of that experience has been on projects and programs to assist the U.S. Department of Defense (DOD). Most of that experience has been for environmental restoration projects and environmental compliance programs on Joint Base Elmendorf-Richardson (JBER) and Eielson AFB. I started out in 1995 as a team member performing environmental field tasks and plan and report preparation. I have worked my way up to where I am now, managing multi-year, multi-million dollar projects including overseeing professional staff and working with DOD representatives to successfully perform their environmental projects and programs.

#### **Skills**

Project Management Hazardous Waste Management Project Health and Safety
Site Assessment Remedial Actions Working with DOD Clients

Working with Regulators Environmental Compliance & Restoration

#### Education

B.S., Environmental Studies, Biology Minor—Bemidji State University (1995)
Graduate Level Coursework, Environmental Quality Science – University of Alaska-Anchorage (1998-1999)

#### Credentials

40-Hour Hazardous Waste Operations and Emergency Response (HAZWOPER) Training Course, (1995)

HAZWOPER 8-Hour Update (February 2022)

8-Hour HAZWOPER Supervisor Training Course, (2009)

RCRA McCoy (20015)

Department of Transportation Hazardous Materials Transportation Skills Training Course, (1999)

US Army Corps of Engineers Construction Quality Management Training Course, (1996)

Confined Space Entry Training Course, (1999)

30-Hour Construction Safety and Health Training Course, (2003)

Fall Prevention & Protection Awareness Training Course, (2004)

Excavation & Trenching Competent Person Training Course, (2004)

#### **Employment History**

Environmental Compliance Consultants, Inc. (ECC)

1500 Post Road, Anchorage, AK 99501

July 2015-Present, Full Time 40+ Hrs/Week

I have served as ECCs RCRA Program Manager and Senior Project Manager for several projects. As Senior Project Manager, I manage all personnel, equipment and supplies required for the successful execution of each project. I develop, implement, and maintain project schedules. I prepare status reports on the activities and progress toward accomplishing project objectives for submittal to the client Government representatives. I manage and control all work activities, including subcontracted services. I arrange, prepare for, and participate in project meetings with the Client Government representatives. Key projects include the following:

- Hazardous Waste Support at Joint Base Elmendorf-Richardson (JBER) and Eielson Air Force Base (AFB), Alaska, three consecutive multi-year, multi-million dollar contracts for the United States Army Corps of Engineers (USACE)
- Hazardous Materials & Waste Management Services at United States Marine Corps Base Hawaii at Kaneohe Bay, Hawaii
- Phase III Remedial Investigation, Eklutna Army Site, Eklutna, AK
- Environmental Compliance Support at JBER, Alaska
- Clean Water Program Support Services, United States Marine Corps Base Hawaii at Kaneohe Bay, Hawaii

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#### **Employment History (Continued)**

#### Weston Solutions, Inc.

425 G. Street, Anchorage, AK 99501

April 2001-July 2015, Full Time 40+ Hrs/Week

I started at Weston Solutions, Inc. as a project scientist and worked my way up to be project Manager for several projects. Some of these key projects included the following:

- Performance Based Remediation at JBER and Clear Air Force Station, Alaska, for the Air Force Civil Engineering Center (AFCEC)
- JBER Environmental Compliance Program Long-Term Monitoring and Maintenance, for AFCEC
- JBER Qualified Recycling Program
- Post-Closure Monitoring Program, JBER OU 1 Landfill

#### **Emerald Services**

Anchorage, Alaska

November 2000-April 2001, Full Time 40+ Hrs/Week

For Emerald Services, I worked as a Hazardous Waste Technician, mostly on Elmendorf Air Force Base assisting the Air Force managing their hazardous waste storage facilities.

#### Safety-Kleen (Government Services), Inc.

Anchorage and Fairbanks, AK

September 1999-November 2000, Full Time 40+ Hrs/Week

I worked as a field chemist for Safety- Kleen's Alaska Defense Reutilization and Marketing Office (DRMO), Hazardous Waste Disposal contract. I performed the necessary steps leading to the safe and legal transportation and disposal of hazardous waste while interfacing with government contracts representatives. I documented and cataloged wastes, processed, manifested, and prepared waste streams for transportation in compliance with federal and state environmental and DOT regulations. I also collected samples of hazardous waste streams for RCRA waste identification.

#### **Chugach Development Corporation**

Anchorage, AK

1998-1999, Full Time 40+ Hrs/Week

For Chugach Development Corporation, I worked as a project scientist on USACE environmental remediation projects preparing work plans and reports.

#### Alaska Village Environmental Services

Anchorage, AK

1995-1998, Full Time 40+ Hrs/Week

For Alaska Village Environmental Services, I worked as a projects coordinator. I Planned and prepared for several remediation projects in several rural Alaska villages. I acted as a member of the management team over local hires during those field efforts. I performed assessments, sample collection and site safety. Fieldwork also included product preparation and application and soil monitoring for bioremediation of petroleum contaminated soils. I also performed equipment maintenance and inventory control. I prepared documents including work plans and closure reports for submittal to the Alaska Department of Environmental Conservation.

Announcement Number: CIN-ZX-ODH-2022-0017

Position Title: Life Scientist/General Engineer/Physical Scientist

Staging Area Number: SA-EPA-0001

Name:

MIDX: 002747334

United States Citizen: Y Veterans' Preference: NV

Military Service Dates (Start of Service - End of Service):

Location(s) Applied to: Anchorage, AK(US); Boise, ID(US); Lacey, WA(US); Portland, OR(US);

Seattle, WA(US)

Series Applied To: 0401

#### Resume

Country of Citizenship: United States

Availability: Job Type: Permanent

Work Schedule: Full-time

Work Experience: The Pennsylvania State University

04/2022 - Present

Department of Plant Pathology and Environmental Microbiology

211 Buckhout Lab Hours per week: 40

Supervisor: Beth Gugino (814-865-7328) Okay to contact this Supervisor: Yes

State College, PA 16802 US

#### Graduate Research Assistant

Primary research duties included researching, developing, planning, implementing, and evaluating dissertation research topic; determining efficacy of anaerobic soil disinfestation (ASD) as a soilborne disease management tool in Pennsylvania high tunnel tomato production systems. This was accomplished by continuous review of the literature, state-wide survey of soilborne diseases for three years (2019-2021), and both greenhouse and on-farm trials. One-on-one farm visits were initiated with growers across the state, including plain-sect growers, to collect soil and plant samples and communicate ASD as a soilborne disease management tactic. Established working relationships with a diversity of growers and worked with them to trial ASD in actively used high tunnels for tomato production. Identified fungal and nematode pathogens in high tunnel systems as part of state-wide survey. Generated recommended management tactics for each grower based on soilborne disease survey results and shared management recommendations in verbal and written form. Maintained culture collection of fungal pathogens collected as part of soil survey. Developed, wrote, and successfully tested protocols related to the evaluation of ASD for pathogen management. Self-identified areas needing additional training and initiated trainings on procedures, equipment, and methods to enhance research experience. All data was organized, saved, and analyzed using Microsoft 365 products and R. Collaborative and interdisciplinary sharing of information and data was accomplished

through the regular use of Teams and Microsoft 365. Awarded the Elwin L. Stewart and Barbara J. Christ Plant Pathology Enhancement Award to fund 1-week Plant-Parasitic Nematode Identification Course at Clemson University, Clemson, SC (2021) to better understand root-knot nematodes. Graduate teaching assistant duties included working with a fellow graduate student and instructor of record to develop curriculum and assignments to help students meet specified and measurable goals and course objective, presenting weekly virtual lectures, and creating hands-on virtual laboratory experiences for 41 undergraduate and graduate students enrolled in PPEM 405 -Microbe-Plant Interactions: Plant Disease and Biological Control (Fall 2020). Developed written and recorded protocols for experiments, purchased lab materials, compiled lab kits, and accommodated several delivery methods of lab kits. Gave hybrid lectures as needed for instructor of record. Recognized by Penn State News for mixed-mode teaching efforts and novel remote laboratory experience during COVID-19 pandemic. Additional graduate research assistant duties included assisting with other research projects throughout the department, maintaining rigorous academic course load each semester, proposal/grant writing, and participating in leadership and volunteer opportunities across the University system and in the community. Other research projects included regular scouting of research hop yard for pests and diseases, starting and maintaining horticultural plants in greenhouses for future studies, isolating bacteria from vegetable crops, and assisting with the nationwide 'Stop the Rot' project. Earned the L. Earl and Veronica Casida Graduate Scholarship in Plant Pathology for 2021-2022 for academic success. Grant proposal submitted in 2021 to Northeast Sustainable Agriculture Research and Education program was fully funded for \$15,000. Served as elected treasurer for the graduate student association, Plant Pathology Association (2019-2020). Volunteer opportunities included such events as Penn State's Military Appreciation (2018-2019), Eberly College of Science ENVISION (2020), Science/Haunted-U (2018-2019), Centre COVID-19 Relief (2020-2021), and Penn State Harrisburg's STEM Career Launch (2020) among others. Regularly reviewed, edited, and gave feedback to team members, collaborators, and colleagues on a variety of papers and projects. Received positive annual feedback from supervisors. Professional development was maintained in part through attendance of annual professional meetings, reviewing current literature, presenting research, and/or attendance of offered webinars. Professional organizations include; American Phytopathological Society, American Society for Horticultural Sciences, International Society for Horticultural Sciences, American Association for the Advancement of Science, Pennsylvania Vegetable Growers Association, and Gamma Sigma Delta.

Christine Faulconer 06/2019 - Present 217 Alturas Circle Orem, UT 84058 US Hours per week: 20

#### Private Garden Manager

Managed private landscape for homebound landowner. Duties included all aspects of landscape and hardscape design, planning, purchasing, propagating, installation/planting, and management. Scheduled crop rotations, plant nutrition programs, propagated seasonal bedding plants under greenhouse conditions, and selected plants to optimize garden bloom time from March through November. Special considerations and physical modifications were made in the landscape to accommodate for safety, accessibility, rehabilitation (including mental, emotional, and physical), aesthetics, and owner preference. Managed and trained 1-3 hourly workers per year. Set annual goals and worked with landowner and hourly workers to accomplish objectives. Developed strong working relationship with landowner while creating water-wise, accessible, and attractive year-round gardens while working within the constraints of geography and site limitations. Experimented with unusual and specimen plants to achieve desired aesthetics. Expanded duties to include other nearby private gardens through word-of-mouth and landscape curb appeal. Managed additional duties, crop rotation, nutritional programs, and bloom times by utilizing Microsoft Suite and other programs to track dates and results.

Utah State University 05/2018 - Present Department of Biology Old Main Hill Hours per week: 40

Supervisor: Claudia Nischwitz (435-797-7569)

Okay to contact this Supervisor: Yes

Logan, UT 84322 US

#### Graduate Research Assistant

Primary research duties included researching, developing, planning, implementing, and evaluating research pertaining to resistance to thousand cankers disease in black walnut, and the evaluation of black walnuts for cold hardiness and desirable horticulture traits. Two research sites were established and maintained for the purpose of assessing natural resistance to thousand cankers disease in a genetically diverse population of black walnut trees. Cultures of the pathogen were maintained throughout the duration of the project and regularly evaluated for potential contaminates and/or loss of pathogenicity. Select trees were evaluated for cold hardiness through differential thermal analysis (DTA) that was conducted on a monthly basis from late fall to early spring (2016-2017). Collaborated with USU Fire Science group to establish weather station at one research site for comparison to DTA results. Horticultural traits were characterized and included in larger disease resistant and cold hardiness spread sheet for other research, nursery, and/or breeding groups. All data was organized, saved, and analyzed using Excel spread sheets and other Microsoft products. Findings were shared in a thesis for degree conferment. Graduate teaching assistant duties included teaching three sections of BIOL 1615 - Biology I Laboratory (instructor of record, 87 undergraduate students, Fall 2017), preparing all microbiological samples for four sections of BIOL 3300 - General Microbiology Laboratory (apx. 100 undergraduate students, Spring 2018) and taught labs, and preparing all material for and teaching BIOL 4430 - Plant Pathology Laboratory (21, undergraduate students, Spring 2018). Worked with students and to meet course goals and objectives. Additional duties included maintaining required course load, training undergraduate lab interns, plant disease diagnostics, processing herbarium samples, and assisting with other research projects and analysis relating to plant pathology. Awarded the Datus M. Hammond Graduate Scholarship for scholarship, character and professional promise (2017). Worked with primary investigator to train over 10 undergraduate students in sterile technique, molecular methods of identification, basic plant and disease identification, data entry, culturing techniques, and using equipment. Assisted with plant disease diagnostics for Utah Plant Pest Diagnostic Lab. Processed herbarium samples included mounting, entering samples into the Intermountain Biota database, and digital imaging. Other projects included Fire Blight Management Trial, Iris Yellow Spot Virus Onion Trial, and High Plains Virus Bioassay. Regularly worked with other researchers to review, edit and give feedback on publications and projects. Sought and received positive feedback from supervisor and collaborators regarding presentations, projects, and publications. Professional development was maintained in part through attendance of annual professional meetings, reviewing current literature, presenting research, and attendance of offered seminars. Professional organizations include; American Phytopathological Society, American Society for Horticultural Sciences, International Society for Horticultural Sciences, International Society for Arboriculture (licensed and TRAQ), and Northern Nut Growers of America. Served as elected Academic Chair for the USU Biology Graduate Student Association.

Monarch Landscape Consulting and Design 11/2015 - Present 3706 West 500 South Salt Lake City, UT 84104 US Hours per week: 40

Supervisor: Brandon Worthen (801-978-2226)

Okay to contact this Supervisor: Yes

#### Lead Consultant

Responsible for early evaluation and diagnostics of landscape problems in clients newly established landscapes. Generated reports as tools to enable more efficient landscape practices, ensure plant health, reduce plant mortality and conserve water. Trained landscape crews, design teams and other contractors on proper planting practices. Worked to promote water conservation practices within the landscape industry and was trained as a Qualified Water Efficient Landscaper. Consulted government and private groups on challenges related to landscape practices including watering, regular maintenance of turf and ornamental plants, tree risk and protection, and plant selection and placement within the landscape. Developed tree protection plans in collaboration with Salt Lake City and University of Utah arborists to protect trees in and around construction sites. Maintained International Society for Arboriculture certificate, earned Tree Risk Assessment Qualification (2014), and was elected as a board member to the Utah Community Forest Council, Utah Chapter ISA (2015-2016). Utah Nursery & Landscape Association member with Utah Certified Nursery Professional certificate. Active volunteer educator with Utah State University Extension and Central Utah Gardens, teaching several courses/classes a year.

USU Extension - Utah County 09/2014 - Present 1426 East 750 North Ste. 202 Orem, UT 84097 US

Hours per week: 30

Supervisor: Taun Beddes (385-268-6535) Okay to contact this Supervisor: Yes

#### Horticulture Assistant

Duties included answering questions by phone, email, and in person from professionals and hobbyist regarding pests, diseases and problems with plants, turf and trees, plant identification, plant selection and working with the public to disseminate information relevant to those topics. Worked with local organizations to educate home growers and hobbyists on current garden and landscape practices. Shared research-based information on plant varieties, management practices, growing conditions and other topics related to horticulture. Assisted with research projects, submitted research ideas, and took necessary steps to see projects through to completion. Some projects include; overseeing all aspects of a radish varietal trial in collaboration with correctional facilities for the purpose of inmate rehabilitation (2014), regular data collection in a high-density apple rootstock trial (2014), and worked closely with primary investigator on all aspects of a pumpkin varietal trial for two years (2013-2014, published). Volunteer opportunities across the Extension system and throughout the community included planning and presenting courses on herbaceous plants, landscape management, and growing plants in the greenhouse (4-week course) to Master Gardeners (apx. 100 hours/year), working with Utah Farm Bureau, Ag in the Classroom, and school districts to facilitate county-wide 'Farm Field Day' for second grade students (apx. 120 hours/year), and community garden classes/presentations throughout the growing season (apx. 20 hours/year).

Utah State University
06/2013 - Present
College of Agriculture
Old Main Hill
Hours per week: 20
Supervisor: Michael Caron (385-268-6530)
Okay to contact this Supervisor: Yes
Logan, UT 84322 US

Course Material Writer

Wrote and prepared course material through extensive research of literature to concisely

describe annual and perennial plants physical description, growing needs, methods for propagation, and pests and diseases. Worked with instructor-of-record to optimize course material to meet learning objectives and enhance the experience for students enrolled in Utah State University course PSC 2600: Annuals and Perennials.

Education: Utah State University

Logan, UT US - 05/2018

Major: Biology

GPA: 3.5

Relevant Coursework, Licensures and Certifications:

Native Plants, Mycology, Applied Entomology, Experimental Design in R, Plant Physiology, Plant Pathology. Thesis submitted in partial fulfillment of degree requirements; "Characterization of Black Walnut Genotypes for Resistance to Thousand Cankers Disease, Frost Hardiness and Other Desirable Horticultural Traits' (2018).

Utah State University Logan, UT US - 08/2013

Major: Horticulture

GPA: 3.67

Honors: Cum Laude

Relevant Coursework, Licensures and Certifications:

Woody Plant Material, Fundamentals of Soil Science, Residential Landscape Design, Greenhouse Management and Crop Production, Urban and Community Forestry, Structure and Function of Plants, Plant Diseases, Pest Management, Weed Management, Modern Vegetable Production, Plant Propagation, Temperate Fruit Production (published Extension fact sheet 'Haskap in the Garden', 2016; four citations, 803 reads on ResearchGate.com), Soil Reclamation, Introduction to Plant Breeding. Licensed arborist through International Society of Arboriculture. Certified Utah Certified Nursery Professional through Utah Nursery and Landscape Association. Certified Utah Pesticide Applicator through Utah Department of Agriculture and Food.

Utah State University Logan, UT US - 05/2013

Major: Horticulture

GPA: 3.67

Relevant Coursework, Licensures and Certifications:

Woody Plant Material, Fundamentals of Soil Science, Residential Landscape Design, Greenhouse Management and Crop Production, Urban and Community Forestry, Structure and Function of Plants, Plant Diseases, Pest Management, Weed Management, Modern Vegetable Production, Plant Propagation, Temperate Fruit Production, Soil Reclamation, Introduction to Plant Breeding. Licensed arborist through International Society of Arboriculture. Certified Utah Certified Nursery Professional through Utah Nursery and Landscape Association.

Utah State University Logan, UT US - 08/2012 Major: Horticulture

Professional Publications: Peer Reviewed Lauritzen, E., Nischwitz, C. 2017.

Characterization of Black Walnut Genotypes for Resistance to Thousand Cankers Disease.

Poster session presented at the American Phytopathological Society Annual Meeting, San Antonio, TX. Lauritzen, E., Nischwitz, C. 2016. Powdery Mildew on Native Plants in Utah. Poster session presented at the American Phytopathological Society Annual Meeting, Tampa, FL. Beddes, T., Caron, M., Miner, D., Drost, D., & Lauritzen, E. 2016. Yield and Fruitsize Distribution of 17 Pumpkin (Cucurbita pepo) Cultivars Grown in Northern Utah. Journal of the NACAA, 9(1). Lauritzen, E., Maughan, T. and B. Black. 2015. Haskap (Blue Honeysuckle) in the Garden. USU Extension Publication Horticulture/Fruit/2015-04pr. Nonpeer Reviewed Lauritzen, J.E., 2018. Characterization of Black Walnut Genotypes for Resistance to Thousand Cankers Disease, Frost Hardiness and Other Desirable Horticultural Traits (Master's thesis). Retrieved from https://digitalcommons.usu.edu/etd/7013/

#### **SUMMARY**

- Self-driven engineering lead at US EPA with Ph.D. in chemical engineering specialized in design of chemical treatment & separation processes.
- Successful project manager with 14 years of experiences in both R&D and high-volume manufacturing environments to lead projects of various scale and complexity utilizing the engineering team, contractors and student supports.

#### **HIGHLIGHTS**

- Project life cycle management
- Development of methodologies and SOPs
- Evaluation of technical/economic feasibility
- DOEs to optimize system design and process conditions
- Publications of government documents, peerreviewed papers, patents, etc.
- Interdepartmental team leadership
- Materials characterization and analyses
- Quality management and process implementation
- Proficient in data analysis, interpretation, and briefing to stakeholders or high-level officials
- Establishment of R&D agreements with nonfederal parties

#### PROFESSIONAL EXPERIENCE

Environmental Engineer (Excepted Service GS 12 Step03; 40 hours/week) Office of Research and Development (ORD), US EPA, OH, USA

[02/2020 - Current]

- Represented a research group of 5 graduate students and technical service contractors to develop investigate treatment technologies for emerging contaminants, PFAS, lead, phosphate, nitrate, etc.
- Developed novel process design for liquid/gas separations, which were introduced in the Chemical Engineering Journal (Impact Factor >13).
- Developed new methods, SOPs, Quality and Safety Plans.
- Served as the project manager for 5 separate research projects published under EPA's 2023 2026 Strategic Research Action Plans (StRAPs).

### Postdoctoral Research Associate (40 hours/week) Graduate Student Researcher (40 hours/week)

[06.2019 - 12.2019]

[09.2013 - 05.2019]

Department of Chemical & Biomolecular Engineering, UCLA, CA, USA

- Collaborated with the California State Water Board to develop water treatment technologies adequate for remote communities
- Invented flexible & energy-efficient membrane-based water treatment method (US10569222B2, US Patent office)
- Developed prototype chemical system, and managed field deployment projects to selected communities In Salinas Valley, California

#### Senior Process Engineer, (40 hours/week)

[03.2011 - 09.2012]

LAM Research Corp. Sungnam Si, S. Korea

- Led a team of 10 15 process / equipment engineers and technicians in responsible for installation and maintenance of etch system (FLEX and KIYO, LAM Research) at customer sites.
- Developed and/or modified plasma etch processes to satisfy increasingly challenging specifications for critical dimensions on continuously upgrading hardware platforms
- Troubleshoot challenging quality issues by conducting diagnostic procedures to isolate the root cause
- Develop and maintain the records to effectively communicate with group members and customers

#### Process Engineer II, (40 hours/week)

[01.2008 - 02.2011]

Samsung Austin Semiconductor, Austin, TX, USA

- Served as a quality lead to routinely conduct statistical quality analyses (e.g., SPC, ANOVA) to ensure delivery of quality products in-time & on-budget.
- Served as the process owner of the deep-contact oxide etching processes in responsible for continuous process innovations via implementation of Engineering Change Notice (ECN).
- Markedly improved process performance measures (e.g., Cpk) to win Corporate's Quality Champion Award

#### **EDUCATIONS**

#### Ph.D., Chemical and Biomolecular Engineering

[09.2013 - 06.2019]

University of California, Los Angeles (UCLA), Samueli School of Engineering, Los Angeles, CA, USA Thesis: Enhancement of Operational Flexibility in Reverse Osmosis Membrane Processes by Concentrate Recycling for Water Treatment

#### **B.S.**, Chemical Engineering

[08.2005 - 12.2007]

University of California, Berkeley (UC Berkeley), College of Chemistry, Berkeley, CA, USA Concentration: Microelectronics fabrication technology

#### **SKILLS**

- Management of hazardous materials and handling
- Chemical system design, cost analysis, development of prototypes and pilot scale system
- Process monitoring such as air/water quality, temp/humidity, particulate matter (PM)
- Polymer synthesis and modification
- Manufacturing technologies of microelectronic devices
- Statistical process control (SPC) and Analysis of variance (ANOVA), MATLAB, and LabView
- Operation of high-pressure or vacuum filtration/plasma systems
- Materials characterization with FTIR, BET, SEM/EDS, TGA, Contact Angle, etc.

#### **AWARDS**

- 2021 Membrane Treatment Best Paper Award, American Water Works Association
- 2020, 2021 Office of Research & Development (ORD) Employee Award, US EPA
- 2018 Hanhwa Total/Chemical Conference Award, AIChE Annual Meeting
- 2017 Conference Award, ICOM
- 2016 NSF stipend award, NAMS
- 2015 Do Wonsuk Memorial Award, AIChE
- 2009 Corporate Quality Champion Award, Samsung Austin Semiconductor
- 2005 Research Experiences for Undergraduates (REU) Fellowship, National Science Foundation (NSF)

#### Certifications

- Drinking Water Operator Certification (Grade T2, 2018 2022), California State Water Resource Control Board (SWRCB)
- Engineer in Training (EIT) in Chemical Engineering, Board: California (ID: 20-532-59) The National Council of Examiners for Engineering and Surveying (NCEES)
- Dry Etch System Operations: FSE 2300 System/SW (LAM Research) Tactras Tool Operation LEVEL2
  Certification, TOKYO ELECTRONS LIMITED (TEL) Telius-SP Tool Operation LEVEL2 Certification
  (TEL)

#### **PUBLICATIONS**

- , T. Speth, N. Nadagouda\*, (2022) High-pressure Membrane Filtration Processes for separation of Per- and polyfluoroalkyl substances (PFAS), Chemical Engineering Journal, Volume 431, Part 2
- S. Verma, M. Nadagouda, Degradation of Per- and Polyfluoroalkyl Substances (PFAS) via Thermal and Nonthermal Treatment Technologies, US EPA (*In-review*)
- L. Rhea, M. Nadagouda, Introduction to Per- and polyfluoroalkyl substances (PFAS) in Ground Water, US EPA e(*In-review*)
- V. deSilva, \*, Occurrence of Per- and polyfluoroalkyl substances (PFAS) for development of Unregulated Contaminant Monitoring Rule (UCMR), AWWA Water Science, (*In-submission*)

- N. Nadagouda\*, (2021) Crossflow treatment of PFAS in Water: Materials Challenges and Potential Solutions, Viewpoint, American Chemical Society (ACS) Accounts of Materials Research, 2 (3), 129-133
- E. Tow, \_\_\_\_, D. Ladner\*, et al., (2021) Managing and treating PFAS in membrane concentrates, AWWA Water Science, Volume3, Issue5
- S. Chae, S. Murugesan, D.K. Duvvuru, H. Kim, M.N. Nadagouda, (2021) Advanced phosphorus recovery from municipal wastewater using anoxic/aerobic membrane bioreactors and magnesiumbased pellets, ACS ES&T Water
- Journal of Membrane Science, Volume 588
- J. Choi, Y. Cohen\*, et al., (2019) "On the Feasibility of Nitrate Removal from Impaired Small Community Well Water via Reverse Osmosis Treatment", Journal of Environmental Management
- A. Rahardianto, Y. Cohen\*, (2019) Multi-Cycle Operation of Semi-Batch Reverse Osmosis (SBRO) Desalination, Journal of Membrane Science, Volume 588
- A. Rahardianto, Y. Cohen\*, (2019) Flexible Reverse Osmosis (FLERO) Desalination, Desalination, Volume 452
- J. Choi, Y. Cohen\*, et al., (2019) "Observed Induction Time in Seeded Gypsum Crystallization", Industrial & Engineering Chemistry Research, 2019, 58, 51, 23359 23365,
- Y. Cohen, J. Choi, A. Aleidan, A. Rahardianto, M. Glickfeld, (2018) "Salinas Valley Distributed Water Treatment Technical Report no-2 for Pryor Farm", Technical Report pursuant to agreement 14-255-550 (C/A 367) with California State Water Resources Control Board.
- Y. Cohen, J. Choi, A. Aleidan, A. Rahardianto, M. Glickfeld, (2018) "Salinas Valley Distributed Water Treatment Technical Report no-3 for Santa Teresa Farm", Technical Report pursuant to agreement 14-255-550 (C/A 367) with California State Water Resources Control Board

#### **PATENTS**

• Y. Cohen, A. Rahardianto, System and method for flexible low-energy membrane-based liquid purification, **U.S. Patent** No. US10569222B2; Feb 25, 2020.

#### **CONFERENCE PRESENTATIONS**

- A. Rahardianto, Y. Cohen, Impact of intermittent feed water flushing on surface mineral scaling during semi-batch reverse osmosis operation, in Oral Presentation, American Institute of Chemical Engineers (AIChE), Pittsburgh, PA, Oct. 2018.
- Y. Cohen, A. Rahardianto, Membrane Mineral Scaling in Semi-Batch and Steady State Reverse Osmosis Desalination a Comparative Study, 2018 American Institute of Chemical Engineers (AIChE) Annual Meeting, ISBN: 978-0-8169-1108-0
- A. Rahardianto, Y. Cohen, Impact of intermittent feed water flushing on surface mineral scaling during semi-batch reverse osmosis operation, in Oral Presentation, The North American Membrane Society (NAMS), Lexington, KY, Jun. 2018.
- A. Rahardianto, Y. Cohen, Application of Semi-Batch Reverse Osmosis (RO) Operation for Water Purification in Small Communities, in Oral Presentation, 2017 American Institute of Chemical Engineers (AIChE) Annual Meeting, ISBN: 978-0-8169-1102-8

- A. Rahardianto, Y. Cohen, Energy consumption for semi-batch RO desalination, in Poster Presentation, International Congress on Membranes and Membrane Processes (ICOM), San Francisco, CA, Jun 2017
- A. Rahardianto, Y. Cohen, Flexible and Low-energy Approach for RO Desalination, 2016 The American Institute of Chemical Engineers (AIChE) Annual Meeting, ISBN: 978-0-8169-1097-7
- A. Rahardianto, Y. Cohen, On the Operational Flexibility of Process Systems for Membrane-based Water Treatment and Desalination, 2016 American Institute of Chemical Engineers (AIChE), San Francisco, ISBN: 978-0-8169-1097-7
- A. Rahardianto, Y. Cohen, Small flexible reverse osmosis system for off-grid water purification and desalination, in Oral Presentation, The North American Membrane Society (NAMS), Seattle, WA, May. 2016.

#### PROFESSIONAL SOCIETIES AND SCIENTIFIC GROUPS

- American Institute of Chemical Engineers (AIChE) since 2014
- International Desalination Association (IDA) since 2014
- Korean-American Scientists and Engineers Association (KSEA) since 2020
- International Congress on Membranes & Membrane Processes (ICOM) since 2016
- The North American Membrane Society (NAMS) since 2015

#### **LANGUAGES**

- English: Fluent in writing, speaking, and listening. +20 years of professional and academic experiences in the United States.
- Chinese (Mandarin): Basic conversational skill, basic writing and reading in traditional Chinese characters.
- Korean: Native language (fluent in writing, speaking, and listening).

#### **REFERENCES**

<u>Jeffrey N. Morgan Ph.D.</u>, Branch Chief and Immediate Supervisor U. S. Environmental Protection Agency Chemical Methods and Treatment Branch ORD, CESER, WID, Chemical Method and Treatment Branch 26 West, Martin Luther King Drive, Cincinnati, OH 45268 USA P: (513)569-7738, M: (513)846-9344, E-mail: Morgan.jeffrey@epa.gov

Mallikarjuna N. Nadagouda Ph.D., Principal Investigator (PI) and Co-investigator

U. S. Environmental Protection Agency

ORD, CESER, WID, Chemical Method and Treatment Branch Luther King Drive, Cincinnati, OH 45268 USA

P: (513)569-7232, E-mail: Nadagouda.mallikarjuna@epa.gov

#### Professor Yoram Cohen, Ph.D. Advisor

Distinguished Professor at Department of Chemical & Biomolecular Engineering, *UCLA* Institute of the Environment and Sustainability 5531 Boelter Hall, Los Angeles, CA 90095 P: (310) 713-1543 E: yoram@ucla.edu

## **Objective**

To obtain the Life Scientist position with USEPA. Highly driven environmental professional seeking to apply my experience and education to promote environmental protection and solve complex problems.

### **Education**

### MASTER'S DEGREE | MAY 2022 | THE OHIO STATE UNIVERSITY

- · Major: Environment and Natural Resources Management
- · Focus: Aquatic Ecosystems and Water Quality
- · Minor: Public Policy and Management
- Related coursework: Conservation and Management of Aquatic Populations, Wetland Ecology, Wetland Ecology Lab, Management of Wildlife Habitat, Field Ecology, Environmental Science and Law, Performance Measurement and Management in the Public Sector, Social Impact Assessment, Managing Public Sector Organizations, Public Policy Formulation and Implementation, International Environmental Impact Assessment

### **BACHELOR OF SCIENCE | AUGUST 2015 | OHIO UNIVERSITY**

- · Major: Geography
- · Focus: Environmental Geography
- Related coursework: Principles of Biology, Conservation and Biodiversity, Environmental Geography, Physical Geography, Physics, Chemistry, Intro to Oceanography, Environmental Geology, Environmental Planning, Cartography, Landscape Ecology, GIS and Mapping Sciences, Biogeography, Statistics, Air Photo Interpretation, Principles of Remote Sensing, Water and Pollution

### **SUPPLEMENTAL COURSEWORK | COLUMBUS STATE COMMUNITY COLLEGE**

· Related Coursework: General Chemistry, Environmental Science, Practice in Statistics

## **Experience**

### DISTRICT ENVIRONMENTAL MANAGER | OHIO EPA | DEC. 2019 - PRESENT

Manage 13 staff members of the Division of Drinking and Groundwaters program. Extensive knowledge, implementation, and enforcement of federal and state law. Administers district program budget and equipment. Manage the district groundwater program, ambient groundwater monitoring and source water protection program. Oversight of district PFAS sampling, harmful algal blooms, and lead and copper program. Assist Division of Surface Water with Electrofishing, QHEI, amphibian

collection, and water chemistry sampling. Assist in wetland permitting process and mitigation site visits.

### **ENVIRONMENTAL SUPERVISOR | OHIO EPA | SEPT. 2019 - DEC. 2019**

Supervised 3 employees of the Division of Drinking and Groundwaters. Oversight of the certified operator compliance program. Directed the review and evaluation of applications for eligibility for certification. Developed statewide guidelines to ensure compliance with agency policies, procedure, and state and federal law. Planned and supervised the work of project teams and special investigations. Provided technical assistance and consultation to internal staff and external customers.

### **ENVIRONMENTAL SPECIALIST II | OHIO EPA | SEPT. 2016 - SEPT. 2019**

Provided technical guidance, consultation, and training to personnel regarding public water systems, sanitary surveys, facility evaluation, complaint investigation, and investigations of suspected non-compliance with state and federal law. Audited district staff to ensure consistency with Agency policy, procedure, guidance.

# WATER PROTECTION SPECIALIST | CITY OF COLUMBUS - WATERSHED MANAGEMENT | JUNE 2014 - SEPT. 2016

Source water protection for City of Columbus public drinking water supply. Drafted technical reports and summaries regarding inspections of compliance with land stewardship agreements and reservoir management plan. Assisted in electrofishing and fish community data collection. Assisted in stream characteristic assessments using Qualitative Habitat Evaluation Index.

### MANAGER | 149 NORTH | FEB. 2013 - JUNE 2014

Served as bar manager providing oversight of daily operations and supervision of up to 13 employees. Responsible for staff task assignment and training. Hired and trained new staff. Managed inventory and ordered, as necessary. Engaged in daily customer service and point person for conflict resolution.

## TEAM LEAD | BASS PRO SHOPS | OCT. 2012 - JUNE 2014

Served as department lead worker providing oversight of daily operation and supervision of up to 15 employees. Responsible for staff task assignment and scheduling. Assisted in hiring process and new employee training. Engaged in daily customer service and point person for conflict resolution.

# FINANCIAL SUPERVISOR | FINANCIAL FOUNDATIONS GROUP | MARCH 2012 - OCT. 2012

Provided financial services to clients and maintained accounts. Prepared and reviewed weekly reports and summaries for upper management. Oversight of daily office operations and supervision of 3 employees. Responsible for staff task assignment and scheduling. Engaged in daily customer service and point person for conflict resolution. Assisted with interview process and training new employees.

# **HEAD WRANGLER | TUMBLING RIVER RANCH | MARCH 2011 - MARCH 2012**

Managed 8 direct reports, 50 weekly guests and 106 head of horses. Responsible for daily ranch operations and employee task assignment. Managed operation budgets, timelines, and materials. Engaged in daily customer service and point person for conflict resolution.

# PARK TECHNICIAN | SANDUSKY COUNTY PARK DISTRICT | APRIL 2010 - NOV. 2010

Conducted general park maintenance which included mowing, planting food plots, application of herbicides, clearing trails, and mechanical work on park equipment. Regularly operated heavy equipment. Assisted in fish community studies and data collection. Assisted in multiple wetland restoration projects and routine wetland maintenance. Planted warm and cool season native grasses.

## **ENVIRONMENTAL CONSULTANT | BUCKEYE WILDLIFE INSTITUTE | AUG.** 2007 - AUG. 2009

Conducted on site property evaluations and drafted technical reports to optimize wildlife habitat. Collected soil samples and made recommendations to improve soil fertility. Planted food plots and trees. Installed wireless camera systems for wildlife surveillance. Operated heavy equipment. Completed wetland permit applications and conducted wetland restoration work.

#### **Skills & Abilities**

#### **MANAGEMENT**

- Manage 13 staff members including inspectors, engineers, hydrogeologists, administrative staff, and interns
- · Perform audits on Ohio EPA staff and prepare reports to ensure statewide consistency
- · Collaborate to develop program goals and methods to measure and monitor progress
- · Conduct interviews, performance evaluations, staff training, and lead staff meetings
- · Knowledge of environmental regulation and development of policy, procedure, and quidance

#### **FIELD**

- · Knowledge of wetland permitting and assisted with mitigation site visits
- · Assisted in wetland delineation, restoration projects, and installation of water control structures
- Assisted in stream surveys using electrofishing, Qualitative Habitat Evaluation Index, and water quality sampling techniques
- · Macroinvertebrate, fish, and amphibian collection and identification
- · Collection and reporting of macroinvertebrate communities through Ohio Department of Natural Resources Stream Quality Monitoring (SQM) Program for Scenic Rivers
- Preparation of technical reports and summaries

· Data base entry and management

#### COMMUNICATION

- · Advanced customer service skills, public speaking, and public outreach
- · Former division representative for Ohio Emergency Operations Center as the communication liaison for large scale emergency response efforts

#### **LEADERSHIP**

- · Serve as a guidance team member on the Contingency Plan Workgroup, Sanitary Survey Workgroup, Backflow Workgroup, Division Training Program Workgroup, and Labor Management Committee
- · Serve as an instructor for the Inspector Training Academy

## **Training**

- Facilitation Basics for Coastal Managers –NOAA Office of Coastal Management (scheduled)
- How to Explain Science, Share Data, and Build Trust: Presentation Skills for Scientists and Public Officials –State of Washington Department of Ecology, Coastal Training Program (Scheduled)
- · Lead Ohio: Inspirational Leaders Program
- · Lead Ohio: Foundations of Supervision Program
- · Ohio EPA Leadership Training Program
- Instructional Skills for Trainers
- US EPA Sanitary Survey Training
- · Ohio EPA Inspector's Training Academy
- · Qualitative Habitat Evaluation Index (QHEI) Midwest Biodiversity Institute
- · Primary Headwater Habitat Training Midwest Biodiversity Institute
- · Ohio Rapid Assessment Method for Wetland (ORAM) Ohio EPA and Ohio State University
- Vegetative Index of Biotic Integrity (VIBI)
- Amphibian Index of Biotic Integrity (AmphIBI)
- · Wetland delineation training and graded exercises
- Dealing with Cyanobacteria, Algal Toxins and Taste & Odor Compounds Workshop –
   Stone Laboratory
- · Algae Identification Workshop Stone Laboratory
- · Federal Emergency Management Agency (FEMA) Professional Development Series
- Incident Command System 100/200/300 and National Incident Management Systems 700/800

#### **Publications**

 Managing Compatible Vegetation for Targeted Species Biodiversity; A companion to the Integrated Vegetation Management Best Management Practice, 3<sup>rd</sup> Edition. October 2021.



#### WORK EXPERIENCE:

U.S. Army Corps of Engineers (4/28/2019 – Present) – Biologist, GS-0401-12

Seattle, Washington United States

Hours per week: 40

Supervisor: Matt Punke, 206-764-3704

- Direct, plan, and conduct activities as lead environmental coordinator/biologist to complete National Environmental Policy Act (NEPA) compliance for U.S. Army Corps of Engineers (USACE) Seattle District (NWS) Civil Works (e.g., Puget Sound and Adjacent Waters, Continuing Authority, General Investigations), Operations and Maintenance, and Military projects.
- Lead project teams in the execution of all procedures and coordination necessary to ascertain that compliance with each environmental requirement is provided for assigned projects.
- Accomplish environmental protection through interpretation and implementation of laws, executive orders, regulations, and policies dealing with natural resources.
- Provide professional advice, guidance, interpretation, and mentoring in the implementation of NEPA; Clean Water Act (CWA); Coastal Zone Management Act (CZMA); Fish and Wildlife Coordination Act (FWCA); and Endangered Species Act (ESA).
- Provide oversight, direction, and review of environmental compliance related documents for plan formulation studies and various other NWS water resource development projects.
- Initiate and develop working relationships to form mutual trust and respect with junior and senior staff at the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), Environmental Protection Agency (EPA), Washington State Department of Ecology (Ecology), and Tribes within the NWS area of responsibility (AOR).
- Serve as USACE NEPA lead assisting the Strategic Capabilities Office (lead Federal agency) and Department of Energy (cooperating agency) Project Pele team for the Construction and Demonstration of a Prototype Mobile Microreactor Environmental Impact Statement (EIS).
- Presented the Project Pele NEPA process and EIS schedule to Federal government team members and contractors during the 3-day design kick-off meetings in Washington, DC.
- Utilize a broad base of scientific and technical information in general, fishery and wildlife biology; ecology; community planning; environmental laws and regulations, policies, and guidance to assure District projects, programs and authorities are used to maximum advantage in considering endangered species restoration and enhancement opportunities.
- Initiate, organize, and lead field visits to collect samples/specimens and to observe and document baseline biological, ecological, aesthetic, and physical environmental conditions in aquatic and terrestrial environments.

- Assess existing habitat functions and values, evaluate ecological impacts of proposed actions and alternatives, and design mitigation and restoration planning measures for unavoidable impacts to fish and wildlife resources.
- Prepare biological evaluations and biological assessments to describe proposed actions and their effects on listed species and/or critical habitat designated under the ESA.
- Apply technical expertise to perform and document wetland reconnaissance site visits,
   delineations, and functional assessments to obtain compliance under CWA Sections 404 and 401.
- Serve as senior technical reviewer on an array of technical reports and correspondence including planning, environmental compliance, and design/construction documents for NWS projects.
- Effectively coordinate and build solid relationships with local sponsors, project managers, services, resource agencies, tribes, and other stakeholders on all assigned projects.
- Provide advice and assistance on controversial questions, new methods, developments and techniques, and resolve conflicts.
- Prepare accurate work estimates for projects to include scope, schedule, and sound cost estimates. Perform work on time and within budget.
- Demonstrate teamwork and cooperation in working with project delivery teams to develop costeffective and technically sound projects that meet environmental compliance requirements.

#### U.S. Army Corps of Engineers (10/24/2021 – 2/12/22) – Tribal Liaison, GS-0401-13

Seattle, Washington Hours per week: 40

Supervisor: LTC Celio Biering, 206-764-3691

- Completed a temporary detail as the NWS Tribal Liaison with coordination activities related to
  Native American interests throughout the District, such as the observance of trust responsibilities,
  observance of treaty rights, exercise of fishing rights, cultural resources protection, wildlife
  mitigation and fishing programs, and environmental concerns.
- Developed and fostered close working relationships with all regional tribes, representing NWS in virtual and in-person meetings with tribal chairs and presidents, tribal councils, tribal staff, and tribal members to discuss issues, programs, and opportunities for partnership.
- Provided advisory, technical, coordination and other support District-wide to the NWS Commander,
   Project Managers, Program Managers, technical staff, and operations personnel to ensure the NWS mission is accomplished while fostering positive relationships with all 50 tribes in the NWS AOR.
- Maintained expertise in Federal and state policies, regulations, treaties, and laws that may affect
  Native American tribes, such as Sections 404 and 401 of the CWA, Section 10 of the Rivers and
  Harbors Act, ESA, NHPA, and Native American Graves Protection and Repatriation Act.
- Assisted NWS staff in conducting tribal coordination and consultation on District activities that may
  affect reservations, treaty rights, or other Federally recognized rights for Civil Works projects,
  cultural resource protection, fish and wildlife stewardship and mitigation programs, construction,
  planning, and regulatory activities.
- Participated in conferences and meetings for Native American issues (e.g., Treaty Rights at Risk Initiative) involving the NWS Commander and key Tribal, local, state, and federal agency officials.
- Prepared briefings materials including information papers, agendas, and other pertinent documents,

- and attended pre-briefs for the Commander and District representatives in preparation for Government-to-Government meetings.
- Worked with NWD and other NWD District Tribal Liaisons on Native American issues concerning policy, consultation, and protocol to ensure consistency among programs.

#### U.S. Army Corps of Engineers (10/02/2016 - 10/13/2018) - Supervisory Biologist, GS-0401-13

Seattle, Washington United States

Hours per week: 40

Supervisor: Laura Boerner, 206-764-6761

- Supervised and coordinated the activities of the Environmental Analysis Section within the USACE NWS Planning, Environmental, and Cultural Resources Branch.
- Oversaw a group of eleven professional biologists, ecologists, social scientists, and archaeologists all engaged in enabling the organization to execute its missions.
- Assigned staff members to project delivery teams responsible for overall project execution.
- Planned, directed, and reviewed the work of professional employees involved in various fields of environmental planning. Evaluated work products in terms of economy and scientific adequacy.
- Managed section activities by selecting and assigning work to subordinate staff while planning for future workload adjustments and emergency requirements.
- Led and mentored staff in the execution of all procedures and coordination necessary to ascertain compliance with the requirements of NEPA; CWA; CZMA; ESA; and NHPA.
- Provided oversight, direction, review, and approval of CWA compliance related documents for NWS plan formulation studies and other water resource development projects.
- Served as the NWS 401 Coordinator, initiated and developed working relationships to form mutual trust and respect with senior regulators at CWA implementing agencies, including EPA and Ecology.
- Provided guidance and field visit trainings to educate colleagues and ensure District project delivery teams were aware of and sensitive to CWA requirements and opportunities.
- Mentored junior staff on CWA Section 404 and 401 compliance including wetland delineations, functional assessments, and compensatory mitigation planning for unavoidable impacts to aquatic resources.
- Provided professional advice, guidance, and interpretation in the implementation of local, state, and federal regulations.
- Served as senior technical reviewer of planning, environmental compliance, and design/construction documents for water resource development and military projects.
- Initiated and/or participated in review and improvement of work methods, organizational features, and the structuring of positions.
- Established performance standards and prepared formal evaluation of subordinates' performance.
- Led and participated in interview panels for potential new staff members.
- Managed highly complex issues and challenging personalities under demanding circumstances.

#### U.S. Army Corps of Engineers (09/14/2009 - 10/1/2016) - Planner/Biologist, GS-0401-12

Seattle, Washington United States

Hours per week: 40

Supervisor: Amanda Ogden, 206-764-3628

- Directed, planned, and conducted activities as the lead environmental coordinator to complete NEPA compliance for Civil Works and Military projects.
- Served as lead environmental coordinator/biologist on a variety of Civil Works water resource planning studies, such as Continuing Authority, General Investigations, and Operations and Maintenance funded studies.
- Led and supervised project teams in the execution of all procedures and coordination necessary to ascertain that compliance with each environmental resource requirement was provided for assigned projects.
- Accomplished environmental protection through interpretation and implementation of laws, executive orders, regulations, and policies dealing with natural resources.
- Provided professional advice, guidance, and interpretation in the implementation of NEPA;
   CWA; CZMA; FWCA; and ESA.
- Applied technical expertise to perform and document wetland reconnaissance site visits, delineations, and functional assessments to obtain compliance under Sections 404 and 401 of the CWA.
- Mentored junior staff on NEPA documentation and wetland delineations and functional assessments for CWA Section 404 and 401 permitting documentation.
- Prepared biological evaluations and biological assessments to describe proposed actions and their effects on listed species and/or critical habitat designated under the ESA.
- Assessed existing habitat functions and values, evaluated ecological impacts of proposed actions and alternatives, and designed mitigation and restoration planning measures for unavoidable impacts to fish and wildlife resources.
- Served as senior technical reviewer of NWS planning, environmental compliance, wetland delineation reports, and design/construction documents.
- Effectively coordinated and built solid relationships with local sponsors, project managers, services, resource agencies, tribes, and other stakeholders on all assigned projects.
- Provided advice and assistance on controversial questions, new methods, developments and techniques, and resolved conflicts.
- Prepared accurate work estimates for projects to include scope, schedule, and sound cost estimates. Performed work on time and within budget.
- Demonstrated teamwork and cooperation in working with project delivery teams to develop cost-effective and technically sound USACE projects that met environmental compliance requirements.

#### Chad Armour, LLC (09/17/2007 - 02/28/2009) - Biologist

Bellevue, Washington United States

Hours per week: 40

Supervisor: Chad Armour – 425-641-9743

- Served as project manager for a variety of natural resource studies and water resource projects.
- Conducted wetland and stream assessments and delineations and prepared the corresponding reports in compliance with the CWA.
- Applied working knowledge of fields such as drafting, land surveying, hydrology, ecology, botany, and soil science in the identification of wetlands and evaluation of impacts of construction, filling, and other activities in waters of the United States.
- Assessed existing habitat functions and values, evaluated ecological impacts of proposed actions and alternatives, and designed mitigation and restoration measures for unavoidable impacts to wildlife.
- Prepared biological evaluations to describe proposed actions and their effects on species and/or critical habitat listed under the ESA.
- Created compensatory mitigation plans for unavoidable impacts to wetlands, streams, and wildlife using guidance from the USACE and the Washington State Department of Ecology.
- Applied knowledge of physical and biological sciences to recommend optimum and alternative natural resource strategies. Accomplished environmental protection through survey and analysis of environmental conditions and projected conditions.
- Worked with environmental principles and techniques to analyze natural resource factors in order to produce clear concise reports and environmental plans designed to convey the information necessary to satisfy code requirements.
- Performed biological monitoring through fieldwork and analysis to determine success of over a dozen mitigation monitoring programs.
- Prepared application documents for Federal, State, and local environmental permits including, but not limited to, USACE permit applications for activities in waters of the United States within the regulatory authority of the CWA and the Rivers and Harbors Act of 1899; Shoreline permits from Ecology; Hydraulic Project Approvals from the Washington Department of Fish and Wildlife; and critical areas permits for local jurisdictions.
- Attained environmental protection through coordination and negotiation with other agencies and the public.
- Managed interdisciplinary project delivery teams, provided advice and guidance on environmental planning studies, and encouraged cooperation with regulatory agencies.
- Responsible for the overall management, coordination, schedule, and execution of assigned projects. Prepared project deliverables and managed project milestones and budgets.
- Developed scope of work, project planning, budgets, and drafted proposals for new job opportunities.
- Worked concurrently on numerous projects utilizing exceptional organization, time management, and written and oral communication skills.

#### **EDUCATION**

University of Washington (09/28/2006 - 5/29/2007)

Seattle, Washington

Degree: Certificate - Wetland Science and Management

Coursework: Wetland Science and Ecological Processes; Wetland Law and Policy; Landscape Understanding of Wetland Setting, Processes, and Management; Restoration and Field Botany;

Identification and Delineation

University of North Carolina Wilmington (01/01/2004 - 12/31/2005)

Wilmington, North Carolina

Degree: Master of Science - Biology

Publication: Leslie, M.L. 2005. Diurnal Time Budgets of Nesting Least Terns and Black Skimmers in

Southeastern North Carolina. M.S. Thesis, University of North Carolina Wilmington.

Western Washington University (09/01/1992 - 03/31/1996)

Bellingham, Washington

Degree: Bachelor of Arts - Major: Psychology; Minor: Sociology

#### **ADDITIONAL INFORMATION**

#### **Job Related Training:**

Columbia Basin Federal Caucus Tribal Training Summit (6/16/21)

Environmental Collaboration & Conflict Resolution for Federal Agencies (4/21/21)

Effective Collaboration and Consultation with Native Nations (12/8/21)

Leadership Development Program 2 (5/31/17)

Conflict Resolution (4/14/2016)

Leadership Development Program 1 (2/12/2016)

Regional Wetland Delineation Training (Reg IV) (7/31/2015)

Wetland Stream Ecology Basic (8/21/2014)

Applying the NEPA Process/NEPA Cumulative Effects (11/18/2011)

Public Involvement & Team Planning (05/06/2011)

Civil Works Planning (09/15/2009)

Planning Principles and Procedures (09/21/2009)

Using the Revised WA State Wetland Rating System, Coastal Training Program (03/25/2008) Using Wetland Mitigation Bank Credits, USACE and the WA Department of Ecology (06/26/2008)

#### **USACE Awards:**

Nominated for Employee of the Year: 2013, 2021

Individual Cash Awards: 2018-2021 Commander's Coin: 2013, 2016

Special Act Award: July 2010, August 2011, August 2012, April 2014, August 2015 BRAVO: March 2010, July 2011, June 2012, July 2012, January 2015, May 2016

#### Life Scientist

Highly motivated, results oriented ecologist and scientist with M.S. in Environmental Studies. Possesses valuable skillset that includes laboratory testing, field testing, analysis, evaluation of data, and remedial strategy. An effective team member with demonstrated ability to develop improvements to greatly impact the underlying concern. Outstanding teacher, practiced at involving and instructing a diverse group of students. Intuitive and familiar in dealing with political, governmental, and regulatory influences affecting the marine environment. An exceptional communicator who is energetic, passionate, and highly motivated to make a difference.

#### AREAS OF EXPERTISE

Biological Research ● GMP and GLP Practices ● Training and Development ● Laboratory Procedures

Design of Experiments ● Regulations and Compliance ● Project Management ● Testing and Analysis

■ ESA Section Consultations ● Programmatic Consultations

#### **SOFTWARE**

Microsoft Office Suite (Word, Excel, PowerPoint, Outlook)

MS Office ● SPSS ● Statistics R ● ARCGeographic Information System (GIS) ● Intranet Quorum ● ACDSee imaging editor

● Sequencher DNA Analysis ● ImageJ

#### **LANGUAGES**

Fluent in English, Cantonese - Chinese, Taishanese - Chinese Basic skills in Japanese, Latin, French, Spanish

#### **EDUCATION & CERTIFICATION**

Evergreen State College, Olympia, WA, 2012 - M.S. Environmental Studies - Marine Sciences

Thesis: The occurrence and distribution of toxic Pseudo-nitzschia events in Washington state: Analysis of scientific findings of findings and policy responses. http://archives.evergreen.edu/masterstheses/Accession86-10MES/Lim\_JRMES2012.pdf

Michigan State University, East Lansing, MI, 2005 - B.S. Political Science - International Relations

Dean's List (2004-2005); Phi Alpha Delta Professional Service Fraternity (2003-2005); Elected member of the Associated Students of Michigan State University Student Government (2003-2004)

#### **PUBLICATIONS**

Contributed: Region, NOAA Fisheries West Coast. "Identifying Rockfish Hotspots in Puget Sound Through Spatial Analysis of "Grey" Data." NOAA Fisheries West Coast Region. 30 Sep. 2016.

Contributed: NOAA Rockfish Recovery Plan Puget Sound/Georgia Basin 2015 Update.

Contributed: NOAA Analysis Report for the Steller Sea Lion Protection Measures for Groundfish Fisheries in the Bering Sea and Aleutian Islands Management Area, Draft Environmental Impact Statement/Regulatory Impact Review/Initial Regulatory Flexibility Analysis 2013.

#### PROFESSIONAL EXPERIENCE

Ocean Associates Inc September 2020 – Present

National Oceanic and Atmospheric Administration Address: 7600 Sandpoint Way NE Seattle WA 98115

Contractor Oregon Washington Coastal Office: Central Puget Sound Branch

Supervisor: Bonnie Shorin, May be contacted: Yes 40hrs/week

Endangered Species Act Section 7 Consultation

#### **Essential Duties**

- Formal Consultation/Biological Opinion: USACE/WDFW Minter Creek Fish Hatchery, USDA Taylor Bay WWTP and Outfall Consultation.
- Serve as a programmatic and technical expert on water quality and/or restoration programs.
- Informal Consultation: EPA Olympic View Resource Area Letter of Concurrence. USACE Kitsap pipe.
- Formal Consultation: USACE Batch 2 Jeopardy Opinion.
- Programmatic Consultations: FPRPIII (32 consultations), HUD (6 presentations), RGP-6 (46 consultations).
- Salish Sea Nearshore Programmatic Consultations.
- Assisted with development of Salish Sea Nearshore Conservation Calculator.
- Review and implement environmental technical standards, guidelines, policies, and formal regulations.
- Serve as a Contract Officer's Representative for contracts, Project Officer for grants, cooperative agreements, and Interagency Agreements in accordance with federal regulations, and agency policies and practices.

#### The UNIVERSITY OF WASHINGTON

January 2015 - Present

Address: 3710 Brooklyn Ave NE, Seattle, WA 98105

#### **Teaching Assistant**

Topics in Sustainable Fisheries (Winter, 2015, 2017), Fisheries Ecology (Spring, 2015, 2016, 2017), Special Topics (Winter 2018)

#### Key Responsibilities:

- Teaching students at graduate level courses
- Developing lessons plans and preparing interesting and involving teaching material
- Successfully leading quiz section and teaching laboratory

#### Parametrix Engineering Planning and Environmental Services

December 2013 - June 2018

National Oceanic and Atmospheric Administration Address: 7600 Sandpoint Way NE Seattle WA 98115

#### **Contractor Sustainable Fisheries Division**

Supervisor: Dan Tonnes, David Fluharty, May be contacted: Yes 40hrs/week

Conduct research into historical distribution, abundance, and habitat associations of endangered rockfish species, analyze results for trends, presenting discoveries and conclusions to numerous groups.

#### **Essential Duties**

- Interviewed key individuals including fishermen, scientists, and regulatory agencies.
- Prepared and documented more than 600 maps evaluating findings, reviewing and testing data to ensure consistent outcomes.
- Reviewed and implemented environmental technical standards, guidelines, policies, and formal regulations.
- Established and reported conclusions regarding numerous threatened species of rockfish.
- Assisted with coordinating the internal agency review, approval, and implementation of proposed fishery management plan amendments and regulatory amendments.
- Assisted with the preparation of discussion papers, briefing documents, or agency correspondence related to fishery management measures.
- Oversaw water media programs to ensure compliance with environmental requirements, and resolve unusually complex, controversial, or sensitive environmental and restoration problems.

- Coordinated the internal review and approval of proposed fishery management plan amendments and/or regulatory amendments.
- Coordinated between agencies to ensure compliance with regulations implementing the National Environmental Policy Act (NEPA), Endangered Species Act (ESA) including Section 7 and 10, and Magnuson-Stevens Fishery Management and Conservation Act.
- Prepared regulatory packages including environmental assessments, federal consistency determinations, paperwork reduction act compliance and other applicable requirements.
- Contributed to Yelloweye rockfish (Sebastes ruberrimus), canary rockfish (Sebastes pinniger), and bocaccio (Sebastes paucispinis) of the Puget Sound/Georgia Basin 5-Year Review: Summary and Evaluation
- Prepared discussion papers, briefing documents, or agency correspondence related to less complex or single-issue fishery management measures.
- Experienced working with staff of the Pacific fishery management council, and local resource management organizations.
- Served as a Contract Officer's Representative for contracts, Project Officer for grants, cooperative agreements, and Interagency Agreements in accordance with federal regulations, and agency policies and practices.

#### NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION, Seattle, WA

September 2012 - September 2013

Address 7600 Sandpoint Way NE, Seattle WA 98115

#### **Biological Scientist**

Supervisor: Katie Sweeney and Lowell Fritz, May be contacted: Yes

Functioned as Subject Matter Expert (SME) and principal scientific resource for near threatened species in northern Pacific, Steller's sea lion.

#### **Essential Duties**

- Collected various data points and established database on Steller's sea lion and connected animals.
- Orchestrated collection of more than 70,000 images of Steller's sea lions found in the Aleutian Islands.
- Determined appropriate management strategy through collaboration with public, individuals, various government agencies, and other key stakeholders.
- Provided technical and policy advice in coordination with NOAA science centers and other partners, as needed.
- Contributed to ESA Section 7 consultation, Review of the Biological Opinion on the Effects of the Alaska Groundfish Fisheries on Steller Sea Lions and Other Endangered Species, 2014.
- Responded to internal and external requests for complex technical and procedural information and assistance related to aquaculture issues; distribute relevant information to stakeholders; and draft content for constituent newsletters, distribution lists, and agency web sites.
- Serve as a Contract Officer's Representative for contracts, Project Officer for grants, cooperative agreements, and Interagency Agreements in accordance with federal regulations, and agency policies and practices.
- Coordinated between agencies to ensure compliance with regulations implementing the National Environmental Policy Act (NEPA), Marine Mammal Protection Act (MMPA), and Endangered Species Act (ESA).
- Reviewed and implemented environmental technical standards, guidelines, policies, and formal regulations.
- Established and reported conclusions regarding numerous threatened species of rockfish.

#### THE OCEAN INQUIRY PROJECT, Seattle, WA

March 2012 - October 2015

Address Ocean Inquiry Project Seattle, WA 98107 Instructor (Seasonal)

Supervisor: Beth Sosik, May be contacted: Yes

#### **Essential Duties**

- Instructed diverse groups of students, informing them about ocean and marine environments, and the various factors that impact them.
- Created curriculum and lesson plans, including specific practices to facilitate learning.
- Modified learning materials to combine process of scientific research and hands-on learning approach.
- Collaborated with educators to utilize Puget Sound as a research and learning laboratory.

June 2011 - June 2012

#### EVERGREEN STATE COLLEGE, Olympia, WA

Address: 2700 Evergreen Parkway Olympia WA 98505

**Laboratory Scientist** 

Supervisor: Gerardo Chin - Leo, May be contacted: Yes

#### **Essential Duties**

- Led research projects in Puget Sound to study water quality and algal blooms.
- Collected water samples for testing and Pseudo-nitzschia count from five strategic sites.
- Performed a variety of tests to determine levels of salinity, nitrogen, phosphorous, chlorophyll, and performed scanning electron microscopy.
- Developed and maintained database for water quality and DNA data on Pseudo-nitzschia blooms.

#### PRINCETON REVIEW, Seattle, WA

August 2009 - June 2010

Address: 4555 Roosevelt Way NE Ste 150 Seattle, WA 98105

#### **Private Tutor Essential Duties**

- Educated individuals in the "Princeton Review" study method for test preparation and college admissions.
- Led classes for 20 students creating tailored lesson plans and educational materials.
- Developed appropriate goals and objectives for students based on individual needs.
- Responsible for coaching, mentoring, and administering LSAC resourced full-length practice LSAT tests.

#### Michigan State University, East Lansing, MI

September 2004 - June 2005

Address: 220 Trowbridge Rd, East Lansing, MI 48824 Teaching Assistant, Natural Science in Australia

#### Essential Duties

- Taught students at undergraduate level natural science courses: geology, ecology, biology, and marine sciences.
- Successfully leading guiz section and teaching outdoor laboratory.

#### **TRAINING**

- NAUI Advanced SCUBA Diver
- NOAA led Project Design and Evaluation Training
- NOAA led Planning for Meaningful Evaluation Training
- USFWS/NCTC Overview of Endangered Species Act Training
- NOAA led Marine Mammal Protection Act Training
- **GMRI MREP West Coast Overview 2018**
- NWETC Certificate Basic NEPA: The Law, Logic, and Language of the National Environmental Policy Act
- Judal Consulting: Grant Writing
- The Seminar Group: Endangered Species Act Updates 2018
- The EPA Institute: The Endangered Species Act

#### **COMMUNITY LEADERSHIP & ACTIVITIES**

Wildlife Volunteer, 2015-Present – WA State Dept. of Ecology Wildlife Oil Spill, WA **Document Transcriber**, 2014-Present – Library of Congress, DC Committee Member, 2012-Present – Duwamish Valley Healthy Communities Project, WA **Investigator**, 2011-Present – Soundtoxins Program, WA Interpreter, 2009-2011 – Seattle Aguarium, WA Field Guide, 2010-Present – Audubon Society, WA Wildlife Volunteer, 2010 – International Bird Rescue, LA

Instructor, 2009 - People for Puget Sound, WA

Lecturer, Western European Politics, 2004-2005 – Michigan State University, MI
Lecturer, Natural Science in the Virgin Islands, 2004-2005 – Michigan State University, MI
Shellfish Conference and Tradeshow, 2012 – Tulalip WA
Lab Researcher, 2011 – Friday Harbor Laboratories, WA
Central European Studies, 2007-2008 – Dartmore Institute, Czech Republic

#### **MEMBERSHIPS**

Asian-Pacific Islander Coalition of Washington State
Diversity Joint Venture for Conservation Careers
Center for Diversity and the Environment: Environmental Professionals of Color (EPOC) Seattle, WA

#### REFERENCES

Professor Dave Fluharty
University of Washington
School of Marine and Environmental Affairs
1492 NE Boat Street
Seattle, WA 98105
206-685-2518
fluharty@uw.edu

Dan Tonnes
National Oceanic and Atmospheric Administration
10 Park Avenue, Building B
Mukilteo, WA 98275
206-536-4643
Dan.tonnes@noaa.gov

Katie Sweeney
National Oceanic and Atmospheric Administration
Alaska Fisheries Science Center
7600 Sandpoint Way NE, Seattle WA 98115
Seattle, WA
206-526-4507
Katie.sweeney@noaa.gov

#### Education

#### Michigan State University

BS Physiology, 05/18.

BS Genomics & Molecular Genetics, 05/19.

#### Work Experience

#### Lead Manufacturing Production Coordinator

04/21 - 08/22

Thermo Fisher Scientific - Detroit, MI

- Managing resource and labor allocation through the production cycle for 18 products.
- Strategically planning production schedules to outperform KPIs

#### Clinical Molecular Technologist

05/20 - 01/21

NGS Lab, Tempus Labs - Chicago, IL

- Leading daily operations in a high-throughput clinical NGS lab.
- Developing new, in use, clinical NGS assays with R&D team

#### Clinical Extraction Technologist

05/19 - 05/20

NGS Lab, Tempus Labs - Chicago, IL

- Performing, & training others to perform manual and automated nucleotide extraction and QC for personalized therapeutic plans & accurate diagnoses for cancer patients.

#### Research Assistant

08/18 - 05/19

Michigan State University - East Lansing, MI

#### Clinical Scribe

05/17 - 05/18

Hayes-Green Beach Memorial Hospital - Charlotte, MI

#### Volunteerism

#### Outreach Specialist

01/21 - 05/21

Central City Integrated Health - Detroit, MI

#### STEM Tutor

06/19 - 03/20

After School Matters - Chicago, IL

#### **Delivery Coordinator**

07/18 - 05/19

Greater Lansing Food Bank - Lansing, MI

Excepted Service (2021-Current) & Competitive Service (2013-2021, Reinstatement Eligible)

#### **EDUCATION**

East Carolina University

Duration: August 2018 – May 2020

M.S. Biology

-Thesis: "Long-Term Impacts to the Federally Permitted Headboat Fishery in the Gulf of Mexico Following the 2010 Deepwater Horizon ("BP") Oil Spill"

State University of New York, Buffalo

Duration: January 2008 – December 2011

B.A. Biology with concentrations in Organismal Biology and Physical Geography

-Undergraduate thesis: "Seasonal Variations in Wetland Buffering Capabilities"

Minor in Environmental Science

#### **CERTIFICATIONS & WORKSHOPS**

United Nations: "Water Pollution Management" (2022)

U.S. EPA: Clean Water Act, "Water Quality Standards Academy" (2022)

Shipley: "Endangered Species Act" (2021)

U.S. EPA: "Task Order Contracting Officer Representative Training" (2021)

U.S. Forest Service: "Introduction to NEPA" (2020).

Shipley: "NEPA- Administrative Record & Document Management" (2020).

Shipley: "NEPA- Cultural & Natural Resource Compliance" (2020).

Shipley: "Applying the NEPA Process and Writing Effective NEPA Documents" (2019).

Duke University, Beaufort Marine Lab: "Marine Planning" (2018).

SAS University Online: "SAS Level I and II" (2016).

Ohio State University Division of Molluscs: "Ohio River Freshwater Mussel Identification" (2015).

Ohio DNR Division of Wildlife: "Mussel Proficiency Workshop" (2014).

West Virginia University Environmental Research Center: "Freshwater Mussels of West Virginia: Life History and Identification" (2014).

#### ADDITIONAL SKILLS & TRAINING

National Environmental Policy Act (NEPA)

Endangered Species Act (ESA)

Magnuson-Stevens Act (MSA)

Project Planning, Implementation, and Management

Public Outreach

Technical and Grant Writing

Inventory & Records Management

Aquatic and Marine Fisheries Research/Monitoring

ArcGIS Pro

Statistical Analysis of Data (SAS and SAS Enterprise)

Microsoft Excel, Word, PowerPoint, Outlook, and Teams

Google Drive, Docs, Sheets, Slides, and Calendar

#### SECONDARY LANGUAGE

Danish

#### PROFESSIONAL EXPERIENCE

#### Biologist (0401)

U.S. Environmental Protection Agency – Washington, D.C.

January 17, 2021- Present, 40 hours/week, FT (Permanent GS-13-01; ZP-04 equivalent)

Supervisor: Susan Holdsworth, (202) 566-1187

May Contact: No.

Overview: Provide expert technical guidance, direction, and quality assurance/control for EPA's National Aquatic Resource Surveys (NARS¹). Manage NARS consultations for the Endangered Species Act (ESA) and Magnuson-Stevens Act (MSA) Essential Fish Habitat (EFH). Support project design and field work for fisheries (aquatic and marine), freshwater mussels, and ecology. Provide recommendations and project implementation oversight for environmental laws and data-stream improvement. Maintain project records and decision-making logic in compliance with the Plain Writing Act, Federal Records Act, and the Administrative Procedures Act (APA).

<u>Primary Duties- Project Management, Documentation, and Collaboration (75%)</u>: Manages ESA Section 7 and MSA EFH consultations for each NARS program, including the creation and management of project records in accordance with applicable laws, regulations, relevant Executive Orders (EOs), and agency policies. Oversee implementation and/or compliance with environmental laws.

Program Management & Compliance with Federal Laws, Executive Orders, and Agency Policies.

- Provide supervision, oversight, and guidance to NARS staff at headquarters, regional, and field staff levels relating to the ESA, MSA EFH, MMPA, EOs, Federal Records Act, and the APA.
- Identify applicability of federal laws to NARS work, recognize issues to be resolved to ensure compliance, develop and propose possible solutions for management, implement corrective strategies, and track efficacy and compliance.
- Create and manage ESA and MSA EFH consultations for NARS programmatic agreements, including setting internal short and long-term milestones to plan, implement, and oversee recurring and ad hoc consultation needs.
- Write concise documents (as appropriate), briefs, memorandums, biological evaluations, consultation packages, and other official correspondence that clearly communicate the approach, analysis, and/or decision logic for consultations.
- Conduct analysis of protected species and habitats from available research, data, and comprehensive literature reviews to determine and support NARS project effects.
- Developing policies and/or procedures to address field compliance with the ESA and MSA EFH.
- Support NARS programs to obtain, compile, and analyze information used in formulating specific components of survey design and project plans to assist the ESA decision-making process.
- Facilitate and maintain meaningful dialogue with representatives of USFWS and NOAA through informal meetings, formal meetings, memos, presentation of consultation progress and survey design, and any relevant policy documents.
- Collaborate with survey leads and USFWS to establish field requirements and conservation measures.
- Implement and manage the incidental take provisions, reporting requirements, and multi-year take tracking under programmatic agreements. Ensure compliance of standards and provisions to avoid unauthorized take of species protected by the ESA and Marine Mammal Protection Act (MMPA).
- Produce, assist, and deliver training for both internal and external audiences on complex ESA legal requirements, codified definitions, survey specific obligations.
- Perform planning, training, and timely execution of all consultation terms and conditions set by USFWS and NOAA
  for all NARS programs. This includes training and oversight of EPA staffed and contracted field crews.
- Manage, coordinate, and document intra- and inter-agency meetings, briefings, conference calls, trainings, and workshops relating to consultations and compliance.
- Create maps and perform geoprocessing in ArcGIS Pro for data visualization, site-specific overlap of USFWS and NOAA trust resources, and effect analysis.
- Interpret new or updated natural resource laws and policies to determine and advise on their impact on mission operations and performance management. Including translating scientific findings for management and other stakeholders into clear recommendations and concise reports.
- Prepare issue papers, briefing papers, white papers on various topics including applicability of federal laws.

<sup>&</sup>lt;sup>1</sup> <u>NARS</u>: collaborative scientific statistical surveys between the EPA, states, and tribes to assess biological, chemical, and physical indicators to determine water quality for the Clean Water Act (CWA). Surveys are the National Coastal Condition Assessment (NCCA), National Lakes Assessment (NLA), National Rivers and Streams Assessment (NRSA), and National Wetland Condition Assessment (NWCA).

#### Survey Support and Technical Writing

- Collaborate with survey leads and NARS personnel to develop, propose, and implement resource protection efforts.
- Ensure adherence to methodologies for natural resource survey activities (wetlands, coastal, lakes, rivers, and streams) and compliance with applicable regulations and authorities.
- Providing technical support and administration to NARS programs to enhance the effectiveness, delivery, and scope of program activities. Includes assessing the adequacy of existing activities, identify emerging issues and problems then recommend modifications to existing programs.
- Set goals/milestones and objectives for routine and ad hoc activities that support NARS planning and implementation.
- Provide management with environmental and ecological factors affecting survey design and implementation.
- Provide technical guidance to surveys on fisheries and ecological community methodologies for survey design.
- Develop and propose new research initiatives for diverse topics, ranging from Environmental Justice (EJ), arctic sampling and expansion, and ESA species assessments.
- Promote studies and the development of data that improve survey efficiency and resolve data gaps.
- Provide briefing papers and presentations to management on NARS data, design, and/or compliance issues.
- Support other NARS staff in document review and editing.

#### Additional Collaborations, Communication, and Outreach

- Facilitate meetings and maintain meeting notes and project records to efficiently collaborate and/or problem solve survey related topics.
- Represent NARS on EPA inter-departmental panels, working groups, and collaborative projects. This includes generating concise documentation for all interactions.
- Review outreach products to ensure effective communication of complex scientific topics to diverse audiences.
- Coordinate and create public release media (social media, news releases, and online public GIS dashboards) to engage the public and stakeholders.
- Create and distribute a quarterly newsletter on NARS surveys/hot topics for staff and upper management.
- Assist in public outreach events and workshops (virtual during Covid).

<u>Secondary Duties (25%):</u> Provide data management and analysis, GIS utilization and program support, recommend and develop QAQC procedures and data timeliness improvements, and support other office needs.

#### Data Management and Program Efficiency

- Perform data processing, QAQC, and analysis using Excel, SAS, and R.
- Provide data analysis results to survey leads and management.
- Create maps, perform geoprocessing, and complete tools/analyses in ArcGIS Pro for non-ESA needs.
- Perform data gathering, evaluation, and analysis to create reports or briefing that provide recommendations and/or develop implementation and project plans that serve to improve overall program effectiveness and efficiency.
- Developing and evaluating recommendations, policies, or management plans that improve organizational effectiveness. Including improvements to data-stream design and database management.
- Assist in the development, design, quality control, and troubleshooting of data collection apps.
- Manage and review NWCA field photographs for 1000+ sites to investigate accuracy of reported data and competition of field crew requirements.

#### Diversity and Inclusion Efforts, Ad Hoc Office Needs

- Perform contract oversight duties as a lead or assistant COR.
- Participating member of the Office of Wetlands, Oceans & Watersheds' "Diversity Team".
- Support research or problem-solving for improving leadership opportunities for staff with disabilities.
- Provide management with administrative support during EPA forums.
- Participate in EPA forums and discussions on returning to work after the pandemic's maximum telework policy and discussions on facilitating an inclusive and tolerant work environment.

Position Awards: Received high ratings in my annual performance review and was promoted from a GS-12 to a GS-13.

Reason for Leaving: I wish to obtain a position that better utilizes my skillset.

#### NEPA Planner (0401)

U.S. Forest Service - Florence, WI

October 13, 2019- January 16, 2021; 40 hours/week, FT (Permanent GS-11-06; ZP-03 equivalent)

Supervisor: Chad Kirshbaum, (715) 479-2827

May Contact: Yes, prior notice needed.

Overview: Manage, direct, and implement an environmental compliance and natural resources program within the Eagle River-Florence ranger district of the Chequamegon-Nicolet National Forest (CNNF) for their National Environmental Policy Act (NEPA) projects as the NEPA Planner, Team Leader of an interdisciplinary group, Writer/Editor, and Records Manager.

<u>Primary Duties (60%)</u>: Oversaw the NEPA program on the Eagle River-Florence ranger district, including the creation and evaluation of NEPA documents and project records. Additionally, ensured compliance of documents, project records, and records structure with the Plain Writing Act, Federal Records Act, Administrative Procedures Act, and Freedom of Information Act.

#### NEPA & Project Management

- Interpreted and implemented environmental and cultural resource laws, executive orders, regulations, and policies.
- Worked closely with the District Ranger in planning, reviewing, and implementing NEPA projects on the CNNF.
- Responsible for the interpretation of new or updated policies to determine and advise on their impact on mission operations and performance management.
- Participated or led discussions with supervisor, subordinates, and/or COR of non-routine topics and issues (ranging from project timeliness, NEPA legal risks, and facility needs); and approved of or made decisions on these when necessary.
- Developed concise milestone reports and NEPA path recommendations to management.
- Wrote or reviewed environmental analyses, assessments, and categorical exclusions to ensure a "hard look" was completed to fulfill all laws and regulations of the NEPA process.
- Supported and coordinated with natural resource specialists to obtain, compile, and analyze information used in formulating specific components of program and project plans to inform the NEPA decision-making process.
- Provided technical guidance to interdisciplinary teams to avoid and minimize impacts to environmental and cultural resources.
- Reviewed and edited resource reports from resource specialists for inclusion in the NEPA process.

#### Documentation and Project Records Management

- Ensured all NEPA documents and project records were in compliance with all applicable law, regulation, and policy
- Created concise and accurate documentation for meetings, telephone conversations, and other verbal interactions with all internal and external stakeholders.
- Developed, monitored, and maintained planning documents and action plans for all aspects of a program of work.
- Performed data gathering, evaluation, and analysis to create reports or briefing that provide recommendations and/or develop implementation and project plans that serve to improve overall program effectiveness and efficiency.
- Prepared, coordinated, and scheduled team and district meetings, briefings, conference calls, trainings, and workshops.
- Reviewed and edited briefings, emails, memos, and decisions.

#### Outreach and External Collaboration

- Maintained contact and relationships with federal, tribal, state, county, and local stakeholders.
- Coordinated public, state, and tribal engagement/outreach for NEPA projects.
- Responded and provided to the public any data and informational requests during and outside the NEPA comment periods and reviewed response to comments during the NEPA process.
- Point of Contact for district NEPA projects and engaged with members of the public frequently and maintained a professional, approachable, and understanding demeaner.

Secondary Duties (10%): Administrative support, outreach, and ad hoc office needs.

• Participate in hiring recruitment events, hiring panels, and interviewing candidates for vacant positions.

- Supported regional office requests and needs including during NEPA objection review periods.
- Prepared annual operating plans and/or budgets for the Florence office.
- Monitored and maintained facilities agreements and fulfilled facility board liaison duties.
- Reconciled monthly bills, purchases, and travel.
- Created and presented a recurring monthly meeting to discuss different cultures and inclusiveness.
- Operated and documented use of federal vehicle.

Position Awards: Time off award for "exceptional" ranking in annual performance evaluation (2020).

<u>Reason for Leaving</u>: Family emergency resolved, I wished to move back towards an area with greater personal opportunities.

#### Fishery Biologist (0482)

NOAA National Marine Fisheries Service - Beaufort, NC

July 12, 2015 – October 12, 2019, 40 hours/week, FT (Permanent ZP-02-02, GS-09/10 equivalent)

Supervisor: Dr. Gregory "Todd" Kellison, (252) 838-0810

May Contact: Yes, prior notice needed.

<u>Overview</u>: Developed, implemented, operated, and assisted in the management of an integrated marine fishery statistical data acquisition program for the U.S. Southeast region (NC-TX) to support oversight of the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Oversaw Port Agents from NC-TX who regularly interact with members of the fishing industry and provide regulatory and other information to federally permitted recreational fishermen to assist with reporting requirements, navigating the permitting process, and understanding fisheries regulations and associated processes.

<u>Primary Duties- Program Management (60%)</u>: Managed and supported daily operational activities including field operations and the oversight of data collection for all program field agents from NC to Texas.

Project Management and Team Oversight

- Developed and tested new methods and protocols to increase data accuracy and program efficiency for the Southeast Region Headboat Survey (SRHS).
- Established and implemented quality controls for fishery catch, effort, and biological data from the U.S. South Atlantic and Gulf of Mexico recreational fisheries.
- Tracked collected field samples and weekly reports from all Port Agents in SE Region and ensured delivery to appropriate laboratories and personnel.
- Coordinated field agent trainings, meetings, and quality reviews. Conducted weekly check-ins and oversaw supply acquisitions and shipping needs.
- Reviewed field agent efficiencies, productivity, and areas of improvement.
- Managed quarterly field agent conference calls and all other team meetings relating to projects and the overall program, maintained program calendars, meeting notes/summaries, and project records.
- Organized and coordinated marine fish surveys/sampling efforts with other port agents, agencies, states, and local scientists and contractors to provide oversight in the southeast recreational fishing industry.
- Supervised project of work, timelines, deadlines, and deliverables for primary and pilot projects.
- Monitored program and program participants to ensure compliance with federal regulations (Magnuson–Stevens Act), regional fishery council policies, and NOAA program procedures.
- Performed analytical tasks and applied problem solving to focus project goals to support innovative solutions to unique and/or politically sensitive issues related to fisheries data.
- Participated or led discussions with supervisor, subordinates, project manager, and/or COR of non-routine topics and issues (ranging from project timeliness, data gaps, training needs, and equipment needs).
- Created and tracked budgets, budget needs, and maintained supply inventory.
- Maintained property records for property assigned to myself or to the port agents. Responsible for conducting annual inventory of property and coordinating with building property officer.
- Prepared and audited purchase requests and supply orders.
- Reconciled and certified monthly bills, purchases, and travel orders (E2).

#### Collaboration, Communication, and Outreach

- Developed, reviewed, and edited scientific documents, white papers, SOPs, and technical reports requested by NOAA Fisheries Southeast Science Center, the South Atlantic Fisheries Management Council (SAFMC), and the Gulf of Mexico Fisheries Management Council (GMFMC).
- Participated in briefings to local, regional, and Washington offices to provide information concerning planning, scheduling, and financial aspects of program plans.
- Prepared, coordinated, and scheduled briefings, conference calls, workshops, and special reports for use by intra/interagency groups.
- Performed data gathering, evaluation, and analysis to create reports or briefing that provide recommendations and/or develop implementation plans to improve overall organizational and program effectiveness.
- Coordinated with state, USCG, and NOAA LEO counterparts to address illegal fishing by vessels, as necessary.
- Maintained routine contact with fishing vessel personnel and representatives to assist in fulfilling or remind of reporting requirements under the regulations.
- Provided technical advice to vessel owners and captains, fishing public, and contract personnel regarding protocols and procedures.
- Reviewed and revised program materials to ensure standards of grammar, style, and format were met.
- Tailored public outreach and speeches to communicate to the appropriate groups on the agency position, program specifics, and procedural requirements of the SRHS.
- Responded to and fulfilled informational and data requests from private institutions, government agencies, nonprofit organizations, and the general public.
- Produced presentations, fact sheets, and pamphlets related to the program and pilot projects.
- Consulted on final projects in terms of appearance, format, use of illustrations, and other design elements.
- Assisted in the development and updating of program website.

<u>Secondary Duties- Data Collection and QAQC (25%)</u>: Perform field work, data input and QAQC, permit compliance checks, and public outreach.

- Performed dockside field work as a fisheries data collection agent (port agent) for the National Marine Fisheries Service in North Carolina.
- Independently performed recurring field sampling procedures using established methods and techniques providing sampling coverage on nights, weekends, holidays, and performing overnight travel.
- Ensured proper collection, processing, and preservation of specimens using prescribed protocols and procedures.
- Completed weekly permit and logbook compliance checks of survey vessels. Suspended and released vessel fishing
  permits based on compliance, coordinated logbook compliance checks with field agents and QAQC logbooks for
  known errors.
- Utilized statistical procedures and software to execute quantitative analyses related to fishery-dependent survey
  design to assess field sampling efficiency, strength of species-specific databases, and timeliness of biological
  sample processing.
- Performed QAQC of data, organized historical and trend data, and reviewed data for accuracy using stratified randomized sampling of datasets.
- Collected, transcribed, refined, and analyzed data using SAS, SAS Enterprise, ArcGIS, Microsoft Excel, and Oracle.
- Evaluates, analyzes, and validates scientific data to share information with internal and external partners.
- Evaluated and extended existing methodological capabilities to improve data quality.

#### Tertiary Duties- Other (15%):

- Maintained and utilized federal vehicle and field equipment (Limnoterra, Bigfin e-FMB, Allegro MX, Samsung tablets, and Doran scales). Recorded vehicle mileage and maintenance in official records.
- Assisted other federal and state fishery data programs as needed, including the Southeast Fishery Independent Survey (SEFIS). Participated in multiweek at-sea cruises.
- Served as deck hand, data processer, and lab technician while at-sea for SEFIS cruises.
- Processed and cataloged biological specimens on deck according SEFIS protocol.
- Conducted laboratory processing of biological specimens collected SEFIS cruises (species ID, counts, weights, lengths, gonad and otolith removal).
- Assisted in SEFIS daily and end-of-shift deck and equipment cleaning and maintenance.

#### **Notable Grant Acquisitions:**

FY18 FIS: "Expansion and enhancement of SRHS electronic reporting systems (SRHS eLog and SRH Oracle systems)": \$199,000.

FY18 FIS: "Expansion of SRHS electronic logbook reporting system for GPS and notification capabilities in the Gulf of Mexico": \$183,000.

FY18 FIS: "Enhancement of SRHS electronic data collection systems (SRHS eLog and SRH Oracle system)": \$171,000.

<u>Position Awards</u>: I received monetary awards each year due to high ratings on my annual performance reviews.

Reason for Leaving: Family emergency required me to move back towards family to assist.

#### **REFERENCES**

Kelly McDonald (EPA coworker): Mcdonald.Kelly@epa.gov

Kelly Fitzpatrick (NOAA Fisheries and EPA coworker): Fitzpatrick.Kelly@epa.gov

Additional references available upon request

Announcement Number: CIN-ZX-ODH-2022-0017

Position Title: Life Scientist/General Engineer/Physical Scientist

Staging Area Number: SA-EPA-0001

Name:

MIDX: 002617646

United States Citizen: Y Veterans' Preference: NV

Military Service Dates (Start of Service - End of Service):

Location(s) Applied to: Anchorage, AK(US); Boise, ID(US); Lacey, WA(US); Portland, OR(US);

Seattle, WA(US)

Series Applied To: 0401

#### Resume

Country of Citizenship: United States

Highest Grade: 11

Availability: Job Type: Permanent

Temporary

Work Schedule: Full-time

Part-time

Desired locations: United StatesAlbuquerque

United StatesTaos

Work Experience: Environmental Protection Agency

06/2020 - Present

1200 6th Ave, Suite 155 Seattle, WA 98101 US Hours per week: 40

Series: 0401 Pay Plan: GS Grade: 12

Environmental Protection Specialist

I was hired on with EPA in June of 2020 to serve as an Environmental Protection Specialist with a focus in serving as a Pesticides Enforcement and Compliance Officer in matters involving the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Three of the main duties of my job are, Pesticides Imports Coordinator, serve as the R10 Section 7 FIFRA coordinator, and conducting inspections. As the Pesticides Imports Coordinator, I maintain relationships with CBP personnel and oversee all pesticide products being imported to the US in AK, WA, OR, and ID. These products can vary from everyday Roundup used in the average household, UV lights claiming to kill specific viruses, to restricted use fumigants. I ensure that all products are registered with EPA, are labeled in accordance to 40 CFR, and that every pesticide product is produced in an EPA registered establishment. If FIFRA violations are present upon import, the import can be denied entry or subject to a civil penalty or fine. I also serve as the Section 7 FIFRA coordinator in

EPA R10. Section 7 of FIFRA ensures that all pesticides and pesticide devices are produced in an EPA registered establishment. I am the coordinator for around 400 EPA registered establishments located in AK, WA, OR, and ID. I ensure compliance with the FIFRA is met by monitoring annual production reports. All establishments are to report what pesticide/pesticide devices were produced, how much was produced, and how much was distributed/sold on an annual basis. If establishments do not report, are late to report, or report inaccurate information, they are subject to actions and/or fines. In addition to the above duties, EPA also funds State and Tribal pesticide programs. These programs have a focus on regulatory use inspections, Worker Protection Standard inspections, and alleged drift violation inspections. Our R10 FIFRA team reviews inspection reports from the states and tribes in our region, and depending on the violation civil or criminal violations can be issued to the violating party. We write and issue formal warnings or penalties if fit to establish a record of compliance. The R10 FIFRA team is also responsible for conducting inspections for producing establishments.

USFS

05/2018 - 06/2020 367 S Pearl St

Salary: \$0.00 USD Bi-weekly

Bayfield, CO 81122 US Hours per week: 50

Series: 0455 Pay Plan: GS Grade: Gs-6

This a time-limited appointment or temporary promotion

Supervisor: Byron Munda ((970)8841429) Okay to contact this Supervisor: Yes

#### Range Technician

As a Range Technician and Crew Lead, I have utilized my degree and past experience in Rangeland management by assessing overall range health, and have contributed to range management decisions based off of monitoring results and range needs. Monitoring techniques included, ocular utilization rates, cover frequency transects, clip & weigh, PFC's, and stubble height. I have also gained knowledge of noxious weed identification and mitigation methods. Mitigation techniques consisted of biological, chemical, and mechanical control. I mainly worked under an applicators license and utilized ATV, UTV and horseback sprayers for noxious weed control. I have grasped NEPA concepts pertaining to the position in relation to developing the most ecological, and rangeland beneficial grazing plans. Along with range monitoring and weed mitigation, I have communicated with permittees and the public regarding cattle grazing allotments. I have regularly loaded and transferred stock, including cattle and horses. While working for the USFS, I have also acquired training and certificates required for full performance of the job. Trainings and certifications include trailer certified, ATV certified, saws training, and red carded FFT2, horsemanship, and defensive driving to name a few. Aside from range concepts, I have been fortunate to receive wildland fire training. I have been an active member of a hand crew on several fires and have participated in prescribed burns as a regular part of the job. I plan on continuing my fire training and receiving my FFT1 certification and completing a task book. I have also been very fortunate to work closely with timber on a consistent basis and retained concepts ranging from timber sale layout, marking timber, abiding by prescription for the timber sale, spun plots to ensure proper tree planting protocols, used GIS systems to mark the plot, measured DBH of trees, understood Timber Sale Administrator concepts, and have assisted timber cruising. I have also assisted in wetland restoration and fish habitat restoration including Rotenone applications to restore native species. Please note that this was a seasonal position and I was a fulltime employee (GS-5) for the 2018/2019 season and was employed as GS-6 crew lead at the beginning of the 2020 season before transferring to EPA R10 as a GS-9.

Hart Construction & Ranching

04/2017 - 09/2018

1585 County Rd 973 Arboles Co Salary: \$0.00 USD Bi-weekly

Arboles, CO 81121 US Hours per week: 50

#### Rancher

I managed 90 acres of property by implementing a proper grazing plan for cattle. I assisted in the branding of cattle as well as loading and hauling stock to and from different pastures. I ensured that an irrigation system functioned to the bests of its ability to optimize forage production. Other than this, I fixed fences, built fences and tended to miscellaneous ranch work that required immediate attention. Furthermore, I doctored livestock, I oversaw prescribed burns on the property, used chainsaws in order to remove fallen trees, and maintained and worked on ATV's and tractors.

High Noon restaurant 10/2013 - 05/2017 425 San Felipe st. NW Salary: \$0.00 USD Per Year Albuquerque, NM 87104 US Hours per week: 40

Supervisor: Llew Kennison ((505)765-1455) Okay to contact this Supervisor: Yes

#### Bartender

As a bartender I ensure that every customer in the restaurant is satisfied with the services being provided to them. I also have the responsibility to make sure customers aren't being over served and will make it home safely. At the end of the night I am in charge of making sure that the money makes it to the safe so the owner can pick it up.

St. Clairs Winery 04/2012 - 09/2013 901 Rio Grande Blvd. NW Salary: \$0.00 USD Per Year Albuquerque, NM 87104 US Hours per week: 40

Supervisor: Matt Bovinette ((505)243-9916)

Okay to contact this Supervisor: Yes

#### Server

I assured that all patrons were served in a friendly manner and have an enjoyable dining experience.

Greenling Enterprises 06/2011 - 08/2011 105 Monastery St.

Salary: \$0.00 USD Per Hour

Sitka, AK 99835 US Hours per week: 55

Supervisor: Ken Rear ((907)966-2301) Okay to contact this Supervisor: Yes

#### ATV tour Guide

I was an ATV tour guide. I took people on four-hour excursions in all terrain vehicles to explore the southeastern Alaska islands and wildlife. I was responsible for a safe and enjoyable experience of all participants.

Education: Colorado State University Online

Fort Collins, CO US

- 05/2018

30

Major: Master of Natural Resources Stewardship
Relevant Coursework, Licensures and Certifications:

Master of Natural Resource Stewardship with a focus in rangeland ecology.

University of New Mexico Albuquerque, NM US - 07/2007

Major: University Studies

Job Related Training: I've completed a Masters Degree in Natural Resource Stewardship. I have furthered my professional experience by becoming a rangeland technician for the Forest Service, which has broadened my frame of reference and eduction in terms of rangeland and agricultural stewardship. I then entered the world of compliance and policy while working for the EPA. I can utilize all skills obtained thus far and apply them to this job as the scientific concepts are comparable and the field knowledge I have gained can be transferred and can be of value while operating safely and efficiently in a field and office setting.

References: Byron Munda

USFS

Rangeland Management Specialist Phone Number: 970-884-1429 Email Address: bmunda@fs.fed.us Reference Type: Professional

Justin Marler

USFS

Rangeland Technician Supervisor Phone Number: 970-884-1408

Email Address: justin.g.marler@fs.fed.us

Reference Type: Professional

Jed Smith

USFS

Rangeland Management Specialist

Phone Number:

Email Address: jedediah.smith@usda.gov

Reference Type: Professional

Announcement Number: CIN-ZX-ODH-2022-0017

Position Title: Life Scientist/General Engineer/Physical Scientist

Staging Area Number: SA-EPA-0001

Name:

MIDX: 002423940

United States Citizen: Y Veterans' Preference: NV

Military Service Dates (Start of Service - End of Service):

Location(s) Applied to: Seattle, WA(US)

Series Applied To: 0401

Resume

Country of Citizenship: United States

Highest Grade: 12

Availability: Job Type: Permanent

Work Schedule: Full-time

Work Experience: US Environmental Protection Agency, Region 10

04/2022 - Present

1200 6th Ave

Seattle, WA 98101 US Hours per week: 40

Series: 0401
Pay Plan: GS

#### Life Scientist

Grade: 12

• Oversaw, coordinated, and Implemented CWA section 320 and Puget Sound geographic program in Washington. Collaborated with State and federal agencies agencies, tribes, and communities on Puget Sound ecosystem restoration and recovery. Worked closely with communities and tribes on identifying complex environmental problems, challenges, and finding creative ways to resolve them. • Served as a technical expert and resource on marine water quality, invasive species, ecosystem restoration, and community engagement. • Managed and served as project officer and contract officer representative for multiple tribal capacity grants, contracts, and interagency agreements. • Led and coordinated strategic initiative to develop and incorporate Environmental Justice into everyday work. Led and implemented new Executive Orders and initiatives on climate change and environmental justice by developing and administering new grant program focusing on environmental justice with respect to ecosystem restoration and recovery. • Served as an expert, oversaw and coordinated EPA response to invasive European green crab. Developed work priorities and milestones, identified and leveraged funding opportunities, interpreted and analyzed policies, and collaborated with tribal, federal, state, and local government agencies. • Developed and maintained partnerships with communities, NGO, industry, tribal, and other federal/state/local governments. Provided scientific and technical support, interpreted and analyzed policies on ecosystem restoration,

transboundary/international resource management, invasive species, water quality, habitat conservation, incorporation of traditional and local knowledge, community based natural resource management, etc. • Represented EPA at local/national/international meetings, conferences, and workshops.

University of Washington - Washington Sea Grant 07/2020 - 04/2022 3716 Brooklyn Ave NE Seattle, WA 98105 US Hours per week: 40 Supervisor: Russell Callender (206-685-9215)

Okay to contact this Supervisor: Yes

Assistant Director for Community Engagement, Extension Leader (GS14 equivalent) - Oversaw and coordinated water quality programs (HABs, Clean Vessel Act small spills, pumpout WA) to ensure compliance with environmental requirements, - Worked with federal and state agencies, tribes, and local communities to understand and resolve unusually complex and/or controversial environmental problems such as pesticide use in shellfish aquaculture, shoreline armoring, marine traffic and fisheries, and contaminated seafood. -Served as an expert on marine water quality, ecosystem restoration, sustainable fisheries, and effective community engagement. - Experienced in leading an research, outreach, and education team and multiple programs consisting of external stakeholders and partners, -Participated in budget planning, development, forecasting, and fundraising through identifying and applying for supplemental research grant opportunities. - Worked collaboratively with internal team members to accomplish organizational programmatic and DEI goals • Lead a team on fisheries, aquaculture, and other natural resource management programs aimed at managing and conserving marine resources, habitats, and livelihoods. • Led multiple staff recruitments, conducted performance evaluations, and was a strong advocate for staff growth and advancement. • Responsible for current marine research, education and outreach program development and the development and implementation of new programs areas, execution of major program policies, and the development of strategic plans • Worked with industry, tribal, community, academic, stakeholders including foreign counterparts in international fora on Canadian/US issues related to habitat quality, marine debris, pollution prevention from marine and fishing vessels. • Oversaw up to 14 professional staff (PhD and MS level) by planning and/or assigning work, setting priorities, implementing strategic plans and identifying developmental and training needs. · Coordinated fishery activities related to the conservation and management of fish and fishing and the promotion of sustainable fisheries by providing fishermen safety trainings, workforce development, seafood handling, working with communities on direct marketing and working waterfronts - Participated in strategic and operational planning and implementation, policy making and maintaining organizational effectiveness. - Maintained the success and responsiveness of WSG's outreach and community engagement activities coastal hazards resilience, working waterfronts, commercial maritime safety training, water quality, fisheries and aquaculture, marine education and training, increasing reach to underrepresented and underserved communities through improved DEI practices. -Maintained effective working relationships and collaborated with various cooperating partner academic institutions, local, federal and tribal government agencies, community groups, industry groups, and elected leaders.

US Environmental Protection Agency, Region 10 12/2016 - 07/2020  $1200 \ 6th \ Ave$ 

Salary: \$0.00 USD Bi-weekly

Seattle, WA 98101 US Hours per week: 40

Series: 0401 Pay Plan: GS Grade: 12

Supervisor: Kim Ogle (206-553-0955) Okay to contact this Supervisor: Yes

#### Life Scientist (0401)

· Oversaw, coordinated, and implemented, water quality programs to ensure compliance with environmental requirements, resolved unusually complex and/or controversial environmental problems, and served as a programmatic and technical expert on water quality and/or restoration programs • Oversaw, coordinated, and Implemented CWA 404 program in Alaska, Washington, Idaho, and Oregon. Collaborated with Corps of Engineers and State land managers on defining extent on federal jurisdiction of waters of the US, compensatory mitigation proposals, and water quality certifications. Worked with tribes on developing wetland program through technical assistance and grant administration. • Worked with a diverse team of technical experts, attorneys, and compliance officers on complex, controversial contamination of military lands and waters. Worked with the Army and Air Force on environmental health, compliance, restoration and clean up. Served as a technical expert on land and water quality, environmental compliance, and restoration. • Reviewed, commented on, and participated in the approval of compensatory mitigation banks as a member of state inter-agency review teams. • Briefed senior leaders on current and potential issues and communicated creative solutions and recommendations • Certified as a Task Order Contract Officer Representative on a multi-year, complex award. Developed scope of work, estimated needs, and verified contractor performance against the award • Reviewed hazardous waste treatment, storage, disposal facility (TSDF) permit applications for completeness, technical adequacy, and prepared permit conditions for compliance with RCRA, CERCLA, CWA, CAA, and TSCA regulations • Applied environmental laws, policies, regulations or directives governing emergency management planning and response operations. As a hazardous waste expert/advisor, I assisted and reviewed application for emergency permits related to munitions and explosives treatment at DOD facilities. Served as a regional environmental unit leader and was trained in emergency response (ICS 100, 200, 300, 400). • Collaborated with external staff and/or organizations on policy and regulatory issues • Prepared official agency correspondence for supervisor signature in response to regulatory/program questions and compliance issues • Reviewed and commented on various work plans, QAPPs, sampling plans, reports related to hazardous waste generation, treatment, storage, and disposal on large military bases • Reviewed PCB self-implementing cleanup and risk-based removal applications and prepared approvals • Reviewed various EPA Environmental Justice grant applications, scored and ranked them against defined criteria, worked with review team to corroborate scores, and recommended proposals for funding • Reviewed federal facility work plans, QA/QC plans, sampling plans, and other plans for compliance with RCRA, CERCLA, CWA, CAA, and TSCA regulations • Coordinated RCRA permit renewals with federal, state, and tribal partners via meetings and site visits, and identified/resolved site-specific regulatory, technical, and policy issues • Assisted in compliance inspections of private and federal TSDFs, wastewater treatment facilities, and other waste generation/accumulation/storage areas for compliance with RCRA, CERCLA, CWA, CAA, and TSCA • Reviewed hazardous waste management history for sites undergoing permit renewal for compliance with corrective action and other pending orders • Used available resources, experts, enforcement tools, and anticipated stakeholder needs to complete assigned projects, support implementation of national program goals, and to ensure timely progress of projects . Developed and maintained complete project records that justify the basis for agency decisions • Prepared enforceable, technically sound, supportable work products that are consistent with regulation and policy • Coordinated and informed relevant members of EPA site/project teams and support personnel about activities and/or resource needs for assigned sites

US Arny Corps of Engineers, Seattle District 07/2016 - 12/2016 4735 E Marginal Way S Salary: \$0.00 USD Bi-weekly Seattle, WA 98101 US

Hours per week: 40

Series: 0499 Pay Plan: GS Grade: 4

This a time-limited appointment or temporary promotion

#### Biologist - Pathways Intern

· Attended and summarized meetings with federal, state, city, county, private, and tribal groups regarding USACE levee, flood control, environmental restoration, and harbor improvement projects in coordination with National Environmental Policy Act (NEPA) requirements • Monitored contractor performance and project compliance at a levee repair project site by: overseeing river sampling activities; inspecting turbidity curtain specification and installation; inspecting fish exclusion device design and performance; inspecting vegetation condition and hydroseed condition and placement during construction activities • Reviewed literature and prepared comments on the effects of dam operations, in-water drilling, pile driving and construction on salmonids • Reviewed civil works, navigation, restoration, emergency management projects and identified potential direct and cumulative impacts to ESA listed species and their habitats • Prepared ESA, NEPA, Magnuson-Stevens Fishery Conservation and Management Act (MSA), Coastal Zone Management Act (CZMA) and State environmental compliance documentation in support of a sunken vessel removal project in Grays Harbor, WA • Monitored multiple completed restoration projects for vegetation cover, species composition, invasive species, presence/absence of installed habitat features, water retention and flow • Investigated fish die-offs at the Hiram M. Chittenden Locks by monitoring dissolved oxygen, salinity, and water temperature and interpreting temporal trends • Estimated and documented riparian habitat characteristics for Habitat Evaluation Procedures (HEP) in support of Puyallup River General Investigation project (field observations and GIS) • Reviewed biological opinions, general investigations, environmental assessments, correspondence, and other NEPA compliance documents • Assisted in the coordination and implementation of an aquatic habitat restoration / gravel nourishment project • Gained experience and working knowledge in various environmental laws and regulations such as: Endangered Species Act; Marine Mammal Protection Act; Clean Water/Air Act; Fish & Wildlife Coordination Act; Magnuson-Stevens Fishery Conservation and Management Act / Essential Fish Habitat; Water Resources Development Act; various other wetland, riverine, and coastal laws

CNMI Division of Fish and Wildlife 09/2012 - 09/2015

PO Box 10001, Lower Base Salary: \$0.00 USD Bi-weekly

Saipan, Mariana Islands, MP 96950 US

Hours per week: 40

Fisheries Data Manager (GS 13/14 equivalent)

· Coordinated and managed multiple, complex, grant programs for the CNMI. Data sources include the boat- and shore- based creel survey, commercial purchase invoice system data, fish imports and the data collected at fishing tournaments and special permitted fishing activities (gillnet exemptions) • Managed 5-7 multiyear, complex, grants and maintained funding from various federal agencies (NOAA- WPacFIN, IFA/FIS, USFWS- WSFR, WPRFMC) through annual renewals by generating proposals and subsequent progress and annual reports · Led, supported, and served as an expert in the fisheries dependent data collection, habitat conservation and restoration, and outreach programs aimed at managing and conserving marine or aquatic resources • Prepared and presented scientific and technical information to promote program efforts • Developed, implemented , and provided oversight and policy guidance on programs designed to ensure program compliance with various Environmental Acts, such as the CWA, Endangered Species Act, Marine Mammal Protection Act, MSA, CERCLA, RCRA, NEPA, and Oil Pollution Act • Coordinated fishery activities, such as development of new and management of existing fisheries dependent data collection programs (creel surveys, fish vendors, fishing special permits, fishing derby monitoring in the CNMI, which are related to the conservation and management of fish stocks and the

promotion of sustainable fisheries in accordance with Fishery Management plans • Represented the CNMI at international fisheries meetings (Secretariat for Pacific Communities). Engaged with fishery managers from Oceania on international issues. • Conducted fishery dependent/independent research and data collection utilizing databases or electronic technologies (WPACFIN) • Prepared reports or analyses on fisheries activities including electronic reporting and monitoring. • Managed and lead teams of natural resource professionals, biologists, technical, and support staff. Oversaw the daily management of an organization/Division of Fish and Wildlife Data Section, including the management of personnel, facilities, and equipment, developing short- and ling-term management plans • Worked and collaborated with local and regional fisheries staff in solving complex, controversial management issues regarding the management of fishery and habitat issues • Served as the lead for a DFW in negotiating and working with with diverse individuals and groups on complex resources issues • Exercised direct responsibility for implementing natural resource policies, mandates, plans, procedures to carry out state fish and wildlife conservation and management • Planned, directed, and executed both short and long term strategic and operational planning activities in fish and wildlife conservation • Represented DFW on the CNMI Area Maritime Security Team where I served as an advisor/expert on coastal water and ecosystems. Attended regular joint operational emergency planning meetings with multiple local and federal agencies (USCG, DOD, DHS). I applied local natural resource laws on potential impacts from natural disasters and the coordinated response to those natural disasters. • Evaluated species habitat conservation plans, project proposals and permits, and developed collaborative solutions for resource management problems • Prepared and wrote scientific papers, technical reports, grant proposals, and other documentation related to the management of natural resources of the CNMI. • Planned, developed, and implemented marine resource protection and management programs across multiple islands with multiple collaborators, stakeholders, and funders • Applied life science disciplines to analyze biological threats such as fish die offs, harmful algal blooms, aquatic disease and impacts to human receptors • Presented biological research projects and programs to educate stakeholders and justify resource recommendations to communities, lawmakers, stakeholders, and other local and federal government partners • Supervised 5-8 staff (across 3 islands) and checked staff work for completeness, accuracy, and timeliness. Prepared position descriptions, interviewed candidates, evaluated staff performance, motivated/recognized staff, implemented disciplinary actions, and made hiring/termination recommendations accordingly • Collaborated with regional fisheries scientists (local/federal governments, NGO, academic) from Guam-DAWR, American Samoa-DMWR, and Hawaii-DAR, NOAA-PIRO, NOAA-WPacFIN, NOAA-PIFSC, USFWS, UH-HIMB, HPU, UOG and from the WP Council on regional fisheries issues

CNMI Division of Fish and Wildlife 06/2012 - 09/2015
PO Box 10001, Lower Base
Salary: \$0.00 USD Bi-weekly
Saipan, Mariana Island, MP 96950 US

Hours per week: 40

#### Fisheries Biologist (GS 12/13 equivalent)

• Lead and supported the fisheries dependent data collection, habitat conservation and restoration, and outreach programs aimed at managing and conserving marine or aquatic resources • Prepared and presented scientific and technical information to promote program efforts • Developed, implemented, and provided oversight and policy guidance on programs designed to ensure program compliance with various Environmental Acts, such as the Endangered Species Act, Marine Mammal Protection Act, MSA, CERCLA, RCRA, NEPA, and Oil Pollution Act • Coordinated fishery activities, such as development of new and management of existing fisheries dependent data collection programs (creel surveys, fish vendors, fishing special permits, fishing derby monitoring in the CNMI, which are related to the conservation and management of fish stocks and the promotion of sustainable fisheries in accordance with Fishery Management plans • Conducted fishery dependent/independent research and data collection utilizing databases or electronic technologies (WPACFIN) •

Prepared reports or analyses on fisheries activities including electronic reporting and monitoring. • Implemented various environmental laws such as the Marine Protection Research and Sanctuaries Act, Coastal Zone Management Act, Clean Water Act, Endangered Species Act, Magnuson-Stevens Fishery Conservation and Management Act, Fish and Wildlife Coordination Act, and the National Environmental Policy Act. • Managed and lead staff of natural resource professionals/biologists. Oversaw the daily management of the fisheriesdependent data collection program, including managing personnel, facilities, and equipment · Evaluated species habitat conservation plans, project proposals and permits, and developed collaborative solutions for resource management problems • Mentored employees on endangered species listing, recovery, consultation, and species habitat conservation • Prepared and wrote scientific papers, technical reports, grant proposals, and other documentation related to the management of natural resources of the CNMI. • Developed and/or implemented programs designed to ensure program compliance with various Environmental Acts, such as the Endangered Species Act, Marine Mammal Protection Act, Comprehensive Environmental Response, Compensation, and Liability Act, RCRA, NEPA, and Oil Pollution Act • Planned, developed, and implemented marine resource protection and management programs across multiple islands with multiple collaborators, stakeholders, and funders • Managed the shore-based, recreational data collection grant programs for Saipan, Tinian, and Rota. Supervised 8 staff and checked staff work for completeness, accuracy and timeliness. Scheduled random surveys (per NOAA WPacFIN protocol), prepared training materials and trained staff, and checked staff work for completeness, accuracy, and timeliness. Acquired equipment and supplies through the procurement process and applied for grants to supplement funding • Collected and entered shore- and boat-based creel survey data using methods developed by federal partners (NOAA WPacFIN). Conducted fishermen participation counts and interviewed them regarding their various fishing activities, fishing methods, duration and catch. • Interacted with fishermen, students, stakeholders, village members, law makers at various workshops, fishing tournaments, radio, and public meetings regarding fisheries and natural resource issues in the CNMI • Reviewed, interpreted, and commented on technical documents, such as EIS/EA, permit applications, to assess biological and ecological effects from military training or proposed development. Conducted site assessments, in the marine environment, for proposed developmental projects • Conducted underwater ecological fish/benthic surveys via SCUBA and snorkel around Saipan. Counted and measured fish, sea cucumbers, urchins, corals and clams along transects. Drafted biological opinions for endangered marine animals needed for ESA Section 7 consultations • Dissected and collected fish otoliths and gonads for the DFW life history project • Investigated fish kills and damage to habitat as a result of pollution, ship groundings etc. • Developed, implemented, and maintained an incentive program for fishermen participating in the creel survey. Promoted data collection efforts by informing fishermen on the purpose of the survey and how data collected will be used for management • Represented the CNMI as a member of the Marianas Plan Team (PT) and Federal Data Collection and Research Committee (FDCRC) data collection technical subcommittee of the WP Council. Attended multiple PT meetings where fisheries status, ACLs, data collection were discussed and appropriate recommendations made. Attended FDCRC meetings where strategic regional planning was conducted and where visions and goals were developed for improving fish data collection and research in the region

University of Hawaii at Manoa 08/2008 - 07/2013 41 Ahui Street Salary: \$0.00 USD Bi-weekly

Honolulu, HI 96813 US Hours per week: 30

#### Graduate Research Assistant

• Evaluated species habitat conservation plans and developed collaborative solutions for resource management problems • Mentored lower-level employees/interns on endangered species listing, recovery, consultation, and species habitat conservation • Prepared and wrote scientific papers, technical reports, grant proposals, and other documentation

related to the management of natural resources of the Pacific. • Performed data analysis and prepare reports, presentations, and scientific documents that explain findings and sediment management issues involving ocean dumping/discharge of dredged materials. • Implemented and coordinated restoration and conservation planning and actions for marine, estuarine and/or anadromous fish habitats. • Collected and assessed water quality and sediment resuspension data in Paiko lagoon, Oahu in conjunction with an ecological restoration project initiated by the Nature Conservancy (TNC). A YSI multi- parameter sonde was used to collect salinity, turbidity, pH, DO, temperature data, which was modeled, processed, and analyzed. Results were presented to TNC, the Hawaii Coral Reef Initiative research group, the Maunalua Bay community and at various international science symposiums • Fabricated and deployed recruitment arrays in Paiko lagoon, Oahu to measure coral recruitment during and after benthic restoration • Collected Porites lobata tissue samples from Laolao Bay, Saipan to analyze for protein biomarkers in conjunction with a current Laolao Bay watershed restoration project • Maintained fish and invertebrates in water tables, holding, and surge tanks in a marine laboratory setting • Collected photoquadrat, and other ecological data parameters along benthic transects, using SCUBA. Certified as a AAUS University of Hawaii Scientific Diver. • Collaborated with federal, state, academic, NGO, and the local community in the restoration of coral reef ecosystems in Maunalua Bay, Hawaii and Laolao Bay, Saipan • Coordinated a NSF-Advanced Technological Education grant between community colleges in Micronesia including the Northern Marianas College, Palau Community College, College of Marshall Islands, American Samoa Community College and the College of Micronesia (FSM). • Supervised and advised college undergraduate and high school students on developing, conducting, and presenting research projects • Volunteered and judged science fair judge for the State of Hawaii. • Presented research results at multiple international science symposiums and was invited to serve as a panel expert and lead discussions on coral reef conservation / restoration at the Asia Pacific Youth Science Education Forum in Okinawa, Japan

Department of Homeland Security 10/2008 - 01/2010 Honolulu International Airport Honolulu, HI 96819 US Hours per week: 20 Pay Plan: SV Grade: D

#### Transportation Security Officer

- Operated various screening equipment and technology and identified dangerous objects in baggage, cargo and on passengers, and preventing those objects from being transported onto aircraft. - Performed searches and screening, which included physical interactions with passengers (e.g., pat-downs, search of property, etc.), conducted bag searches and lifting/carrying bags, bins, and property weighing up to 50lbs. - Controlled terminal entry and exit points. - Interacted with the public, gave directions and responding to inquiries. - Maintained focus and awareness while working in a stressful environment which includes noise from alarms, machinery and people, crowd distractions, time pressure, and disruptive and angry passengers, in order to preserve the professional ability to identify and locate potentially life threatening or mass destruction devices, and to make effective decisions in both crisis and routine situations. - Engaged in continuous development of critical thinking skills, necessary to mitigate actual and potential security threats, by identifying, evaluating, and applying appropriate situational options and approaches. This included application of risk-based security screening protocols that vary based on program requirements. - Retained and implemented knowledge of all applicable Standard Operating Procedures, demonstrated responsible and dependable behavior, and is open to change and adapts to new information or unexpected obstacles. - Applied knowledge of security issues, threats and/or challenges facing transportation security to minimize security threats. -Interpreted and applied transportation security policies, directives and regulations to comply with the agency's mission. - Implemented practices and procedures to conform to transportation security policies, directives and regulations. - Recommended modifications

to existing practices and procedures to conform to changes in transportation security policies, directives and regulations.

CNMI Department of Public Safety

07/1999 - 07/2003

PO Box 10001. Civic Center Salary: \$0.00 USD Bi-weekly

Saipan, Mariana Island, MP 96950 US

Hours per week: 40

#### Police Officer

• Enforced criminal and traffic laws, responded to emergencies, investigated cases, interviewed witnesses/suspects/victims, wrote reports, and testified in court • Certified and trained in firearms, self-defense, high stress communications, investigations etc. • Interacted with the community and trained in community oriented policing • Familiar with the court system and investigative work • Collaborated with various agencies, (FBI, DEA, Customs, Immigration, Environmental Agencies) on joint law enforcement and emergency management operations

Education: University of Hawaii at Manoa

Honolulu, HI US

- 08/2018

Major: Zoology (Marine Biology)

University of Hawaii at Manoa

Honolulu, HI US

- 12/2014

Major: Zoology (Marine Biology)

University of Hawaii at Manoa

Honolulu, HI US

- 07/2007

Major: Marine Biology

Northern Marianas College Saipan, Mariana Island, MP US

- 05/2002

Major: Criminal Justice

Job Related Training: • Grants Project Officer - US EPA • Contaminant Chemistry in Soil & Groundwater - NWETC • Basic Environmental Geophysics - USACE • Groundwater - Surface Water interaction - US EPA • Project Management Essentials (FranklinCovey) - US EPA • Wetland Delineation - USACE • Task Order Contract Officer Representative (TOCOR) - US EPA • Environmental Unit Leader (ICS) - US EPA • Human Health and Ecological Risk Assessment -US EPA • Incident Command System 300/400 - US EPA • Federal Facility Remedial Project Management - US EPA • Remedial Project Management - US EPA • Basic Inspector Training - US EPA • RCRA Permit Writers Course - US EPA • Chemistry for Environmental Professionals -Applied • Chemistry for Environmental Professionals - Fundamentals • Hazardous Waste Operations and Emergency Response (HAZWOPER) - 40 hr • Basic Grants Management - US Fish and Wildlife Service • NOAA grants online and grants writing training • USFWS Tracking and Reporting Actions for the Conservation of Species (TRACS) • Federal Consistency workshop • ESRI ArcGIS I, II, Server Configuration, and Server Sharing • Coastal Marine Spatial Planning • AAUS Scientific Diver, University of Hawaii at Manoa • Small boat operator course (American Boat Operators Course) • Nitrox, Master Diver, Rescue Diver, NAUI • CPR, O2 administer, AED, Red Cross • Laboratory Safety, Hazardous Waste Generator and Initial Biosafety Training • Hazardous Materials - first responder awareness and first responder

operational course • Community Oriented Policing • Emergency Vehicle Operators Course • Emergency Medical Technician (National Registry)

References: Narrissa P. Brown US Fish and Wildlife Service

Conservation Planner

Phone Number: 808-220-3047

Email Address: narrissa\_brown@fws.gov

Reference Type: Professional

Kimberly Ogle EPA Region 10 Section Chief

Phone Number: 206-553-0955

Email Address: ogle.kimberly@epa.gov

Reference Type: Professional

Kaipo Perez III

Pacific Islands Regional Office - NOAA Fisheries

Resource Management Specialist Phone Number: 808-725-2575

Email Address: kaipo.perez@noaa.gov

Reference Type: Professional

Joe Roberto

EPA Region 10 (retired)

Environmental engineer / Multi-media Inspector

Phone Number: 253-670-2087

Email Address:

Reference Type: Professional

Additional Information: I am a US citizen and registered for selective service.

Education B.S. in Environmental Technology from North Carolina State University, 2010, GPA 3.14

**Personal** Certified hazardous materials manager (CHMM) with consulting experience in water regulations and environmental compliance.

#### PROFESSIONAL WORK EXPERIENCE

Project Environmental Scientist August 2015 - Present

Golder Associates USA - a member of WSP, Greensboro, North Carolina

Salary: \$75,000 per year

Job Type: 40+ hours per week, Full-Time
Supervisor: Dusty Reedy: (336) 852-4903

• NPDES consulting and implementation

- Ensure clients maintain compliance with a variety of water quality rules and regulations, state and federal
- Project manager including groundwater compliance at seven solid waste facilities, phase I & II
  environmental site assessments, SPCC/SWPPP plan creation and implementation, and groundwater
  compliance at a RCRA facility
- Communicate both verbally and in writing highly technical water sampling results to a variety of technical and non-technical audiences
- Develop proposals and statement of qualifications for budget analysis and preparation
- Conduct sampling and reporting of groundwater compliance projects in North Carolina, South Carolina, Georgia, and Tennessee, including CCR landfills, C&D landfills, MSW landfills, industrial facilities, and superfund sites
- Field team leader for the majority of groundwater compliance field work performed out of the Golder Greensboro location

**Environmental Safety Manager** January 2015 - August 2015

Alamance-Burlington School System, Burlington, NC

Salary: \$39,000 per year

**Job Type**: 40 hours per week, Full-Time **Supervisor:** Jay Fuller: (336) 570-6482

- Maintain, implement, and improve upon a variety of environmental programs at 35 schools across Alamance County, NC
- Act as liaison between the school system and any outside environmental contractors
- Perform safety audits and inspections, fire safety inspections, and oversee compliance with applicable regulations

Lab Pack Chemist/Project Manager August 2013- January 2015

Clean Harbors Environmental Services, Reidsville, NC

**Salary**: \$36,000 per year not including overtime **Job Type**: 40+ hours per week, Full-Time **Supervisor:** Kenneth Hall: (336) 342-6106

- Segregate, pack, and transport hazardous waste according to chemical compatibility and applicable regulations
- Manage the medical and hazardous waste storage areas for five hospitals located across North Carolina

Lieutenant with Ocean Rescue May 2008 - August 2013

Corolla Ocean Rescue, Corolla, NC (now known as Corolla Beach Rescue)

Salary: \$12.50 per hour

Job Type: 48+ hours per week, Seasonal Supervisor: Sylvia Wolff: (252) 202-8142

- Responded to life threatening scenarios involving beach injuries, swimmers in distress, and other medical emergencies on the beach or in the sound
- Supervised three lifeguards and acted as their first line of support in emergencies

**CERTIFICATIONS** – Certified Hazardous Materials Manager (CHMM), 40 Hour HAZWOPER, CPR/AED, MSHA 24 Hour, 10 Hour OSHA Construction, and former first responder (certified 3 separate times from 2008-2013)

**ACHIEVEMENTS** - State Champion in the 200 yard freestyle (high school), former captain of two separate sports teams, scholarship athlete for the NC State swimming team, CAT Scholar Athlete, ACC Academic Honor Roll and dean's list



#### **EDUCATION**

University of Illinois at Chicago (2012 - 2017)
Doctor of Philosophy in Chemistry
Thesis: New Developments in Base Metal-Catalyzed C-H Borylation
University of Illinois at Urbana-Champaign (2006 - 2010)
Bachelor of Science in Chemistry

#### **WORK EXPERIENCE**

**Intel** / Environmental Modeling Engineer – Salary: 135,000/year; 50 h/week February 2021 – Present / Hillsboro, OR

- → Environmental Modeling Engineer leading sustainability initiatives for the waste systems teams at Intel
- → Developed models for environmental pollutants generated by manufacturing equipment across multiple fabrication plants across the globe and ensure projections meet local environmental agency compliance
- → Automated data analysis with Python scripts to eliminate the need for manual analysis, resulting in increased data integrity, accuracy, and speed
- → Collaborated with many parties within my team and across teams from different business units to develop new approaches in environmental modeling while leveraging my scientific background
- → Worked with senior management to accurately convey business needs for liquid waste system utilization and projections for fabrication plants across the globe
- → Coordinated with different business units to ensure waste streams were within permitted EPA limits
- → Coordinated gas emission testing on new first of kind equipment to accurately project emission models
- → Expert on data analysis of gas emission and liquid emission testing using modern chemistry techniques to ensure accurate results

Relevant Skills: JMP, JSL, Python, Infrared Spectroscopy (FTIR), Liquid Chromatography/Mass Spectrometry (LC/MS), Ultraviolet/Visible Light Spectroscopy (UV/Vis), Ion Chromatography (IC), Gas Emission, and Liquid Testing

Intel / Lithography Process Engineer – Salary: 135,000/year; 50 h/week July 2017 – February 2021 / Hillsboro, OR

- → Lithography Process Engineer focusing on new process development for 14 nm transistor process node and beyond, with a focus on end of line yield increases
- → Helped implement first of its kind TEL Clean Tracks into new Lithography areas, leading to new process challenges and solutions for defect reduction and fleet matching
- → Generated and executed multi-variable design of experiments (DOE) to identify key driving factors for process development and defect reduction
- → Expert on statistical analytical methods including statistical control processes, process control, and process matching
- → Conducted routine failure analysis of tool sets, material, and equipment
- → Coordinated with different business units of both technical and non-technical backgrounds to deliver key process goals
- → Mentored and trained new engineers and manufacturing technicians

Relevant Skills: JMP, JSL, SQL, C#, Statistical Process Control (SPC), Design of Experiments (DOE)

**University of Illinois at Chicago** / Graduate Research Assistant – Salary: 27,000/year; 60 h/week August 2012 - April 2017 / Chicago, IL

- → Research emphasis on organometallic transformations with first row transition metals (Copper, Zinc, Iron) to provide new sustainable green approaches to catalysis
- → Synthesized and developed a wide variety of new heterobimetallic complexes that utilize metal-metal cooperativity for unique and novel approaches in reactivity
- → Developed environmentally friendly base metal heterobimetallic catalysts for photolytic C-H Borylation of arenes
- → Expertise in air-free chemistry techniques including both Schlenk line, glovebox, and gas mediated reactions
- → Managed chemical ordering, inventory, and glovebox maintenance for duration of graduate research
- → Mentored and trained new undergraduate students who did not possess prior research experience

Relevant Skills: Multi-nuclear Nuclear Magnetic Resonance (NMR), Gas Chromatography/Mass Spectrometry (GC/MS), FTIR, X-Ray Diffraction (XRD), UV-Vis, Column Chromatography, Density Functional Theory (DFT)

Procter & Gamble / Researcher – Salary: 53,000/year; 40 h/week

December 2010 - July 2012 / Cincinnati, OH

- → Formulation chemist for the Pantene, Vidal Sassoon, Rejoice shampoo brands
- → Research focus included formulation design of new shampoos for emerging markets
- → Developed and coordinated large scale studies based on multi-variable design of experiments for new product testing in emerging markets: China, India, Thailand
- → Member of security team performed quarterly security audits of Pantene department

Relevant Skills: JMP, Design of Experiments (DOE), Formulation Chemistry

#### **PUBLICATIONS**

- → Jayarathne, U.; Bagherzadeh, S.; Mankad, N. P. Heterobimetallic Complexes with Polar, Unsupported Cu-Fe and Zn-Fe Bonds Stabilized by N-Heterocyclic Carbenes. Organometallics 2013, 32, 3986-3992
- → Cooperativity. J. Am. Chem. Soc. 2013, 135, 17258-17261.
- → Mankad, N. P. Thermal C-H Borylation Using a CO-Free Iron Boryl Complex. Chem. Comm. 2014, 51, 5379-5382.
- → Parmelee, S. R.; Zhu, Y.; Mankad, N. P.; Keith, J. A. A Heterobimetallic Mechanism for C-H Borylation Elucidated from Experimental and Computational Data. ACS Catalysis. 2015, 5, 3689-3699.
- → Catalysis. ACS Catal. 2017, 7, 146-149.
- → Leon, N. J.; Waldhart, G. W.; Mankad, N. P. Fundamental Organometallic Chemistry Under Bimetallic Influence: Driving β-hydride Elimination and Diverting Migratory Insertion at Cu and Ni. Dalton Trans. 2017, 46, 5518-5521.
- → Leon, N. J.; Yu, H.-C.; Mankad, N. P. Mixed Phosphine/Carbonyl Derivatives of Heterobimetallic Copper-Iron and Copper-Tungsten Catalysts. Polyhedron. 2019, 1, 116-123.
- → Leon, N.J.; Yu, H.-C.; Mankad, N. P. Pursuit of C-H Borylation Reactions with Non-Precious Heterobimetallic Catalysts: Hypothesis-Driven Variations on a Design Theme. Synlett 2020, 31, 125-132.

### **Work Experience Summary:**

- · Master of Science degree in Environmental Science.
- Extensive experience serving as an Environmental Manager for the FHWA,
   Dept. of the Navy and Dept. of the Air Force, interacting with a variety of
   Federal and State agencies.
- Daily integration with all environmental program management areas, to include Air Quality, Hazardous Waste, Compliance, Restoration, Natural and Cultural Resources, and NEPA.
- 2 years of supervisory experience at both the Military and Federal level.
- Level II Certified (FAC-COR) Contracting Officer's Representative
- Clearance: Secret (current)

### **Experience:**

### Physical Scientist Water Quality Program Manager

Department of the Air Force Environmental Division, Mountain Home Air Force Base, ID July 2020 to Present

Currently serving as the Water Quality Program Manager at Mountain Home Air Force Base (MHAFB), ID. MHAFB is a multi-operational, composite force training, and air intervention Air Force Base spanning over 7,400 square miles of air space and more than 122,000 acres of land space, with three fighter squadrons, more than 60 fighter jets and approximately 5,000 military and civilian personnel with an annual operating budget of approximately \$200 million.

Duties include to serve as the base lead, point of contact and Program Manager for all installation water quality, stormwater, and wastewater issues, processes, permitting and activities. Ensure proper sampling and testing of all 53 monitoring wells and 14 base production wells found throughout the installation. Provide oversight and direction to contractors conducting sampling. Analyze and approve all data acquired during sampling events and serve as the official installation liaison with Idaho Department of Environmental Quality (IDEQ), submitting all necessary information from sampling for IDEQ permit and Idaho Administrative Code (IDAPA) requirements. Maintain, review, update and process all water quality permits and wastewater permits required for all operations on the installation. Oversee 2 FTE contractors conducting 24 hour wastewater operations at the installations Wastewater Treatment Plant (WWTP). Ensure compliance with wastewater reuse in accordance with permit requirements and submit an annual report detailing all wastewater operations, activities, and process as well as all analytical laboratory reports for state agency requirements.

Additional duties include to provide and apply regulatory, technical and environmental expertise towards problems encountered in achieving compliance with Federal, state and local environmental control regulations, to include air, water and hazardous waste, as well as the full range of domestic and industrial waste water treatment and disposal to include toxic chemicals. Oversee preparation and updating of inventories and corrective measures to reduce pollutants emitted to water, atmosphere, or land from the installation and operations, or that constitute a health hazard to adjacent civilian communities. Coordinate actions required for funding, design, construction, and operations of equipment or facilities to correct deficiencies and to ensure compliance with environmental regulations. Conduct installation-wide environmental assessments, audits, and studies to evaluate potential pollution sources, initiation of corrective measures required to prevent or counteract pollution potential, preparation of contingency plans and propose mitigation efforts for environmental issues such as hazardous waste spill recovery programs, chemical and biological treatment of wastes, and disposal or recycling of trash and refuse. Serve as an environmental technical advisor in executing projects to the Environmental Protection Committee and serve as a support member on other applicable boards and committees. Review project design and specifications, engineering plan sets, work plans/requests and method statements for issues affecting environmental compliance.

Coordinate and implement financial and budget execution activities to include obligations, expenditures, and shortfalls for assigned projects. Prepare contract specifications, statements of work (SOW), government cost estimates and contract supporting documentation in support of acquisition of equipment and services for assigned programs/projects. Act as Contracting Officer Representative (COR) on assigned contracts, providing technical and cost oversight. Coordinate with other expert personnel at installation organizations, municipal planning offices, sister services, regulatory agencies and private organizations. Develop and present briefing packages and prepare a variety of related reports. Serve as a technical consultant to public affairs on media relations and prepare responses to congressional inquiries, audit reports, inspection reports, press releases and public concerns. Participate in public meetings providing technical environmental expertise.

### Physical Scientist Tanks, POL, Spills, SPCC and EMS Program Manager

Department of the Air Force Environmental Division, Mountain Home Air Force Base, ID March 2020 to July 2020

### **Storage Tanks**

Served as a Physical Scientist at MHAFB for the Storage Tanks Program, ensuring that the over 200 above ground storage tanks (ASTs) and underground storage tanks (USTs) are properly maintained, permitted, inspected and serviced in accordance with all applicable Federal and state regulations. Conducted routine inspections of all aspects of the over 5 million gallon capacity base-wide system. Served as the main point-ofcontact (POC) in the event of a breach, leak, spill and ensured that timely contract support was in place, proper agency notification was conducted within regulatory timelines, and maintained constant contact with base command providing frequent updates on the status of the event(s). Coordinated and directed the management of all USTs and ASTs on base through a network of over 30 appointed unit tank managers. Provided faceto-face interaction and communication with all regulatory inspectors and regulators for any formal or informal audits and inspections. Delivered frequent and direct correspondence to Command level staff, to include reports, memos, presentations, and regulatory documents. Ensured that the installation, operators, and tenant activities remained in compliance with constantly changing guidelines and standards while in support of full spectrum testing and training.

#### **Petroleum Oils and Lubricants (POL)**

Served as the Program Manager for the Petroleum, Oils and Lubricants (POLs) storage yard/farm to include two 1.9 million gallon ASTs and two 500,000 gallon ASTs, multiple pump houses and thousands of feet of transfer pipeline providing Jet A fuel to all fighter jets operating at MHAFB. Conducted inspections of the fuel yard area, secondary containment, ASTs, pump houses, and all pipelines to ensure lack of leaks or breach and compliance with all regulatory requirements. Served as the lead POC for all annual, unannounced, formal and informal inspections of the yard/farm and system; provided all documentation, completed all permitting requirements and directly briefed Base Command on status, requirements and permitting aspects through reports, presentations and memos. Coordinated contracting, performance, and reporting for required testing. Coordinated with area POCs, tenant commands, and district enforcement staff for annual and other inspections. Escorted inspectors/regulators and provide information as needed. Consulted with facility POCs to answer their compliance questions. Served as the main point of contact between facility POCs, regulatory agencies and Command Staff.

#### Spills, Spill Prevention Control Countermeasures (SPCC)

Served as the base lead and Program Manager for all spills, spill response, spill prevention control and countermeasures and the base-wide installation spill response plan. Coordinated the identification, clean-up, disposal of product, contract management, and regulatory agency notification for all spills throughout MHAFB. Served as the main POC for spill response, contractor based clean-up efforts, proper disposal of spilled product, and conducted the proper reporting process to all necessary regulatory agencies as defined by regulations. Maintained the base-wide installation spill response plan, coordinated and oversaw the annual updating process of the spill response plan and reviewed and authorized any final draft of the plan. Recommended facility and process improvements to reduce environmental liabilities, improve health and safety, reduce operating costs and energy consumption, and ensure the viability and sustainability of the installation to continue to support flight operations. Identified emergent operations-related issues that need to be coordinated with various agencies, Command Staff, and coordinated with others on station as applicable to develop appropriate

responses. Developed, proposed, and implemented response strategies, coordinated with Command Staff, Rear Echelon Command (REC), Region, Flight Command and other Federal and state agencies as appropriate.

### **Environmental Management System (EMS)**

Served as the Program Manager for the implementation of the base-wide Environmental Management System (EMS). Coordinated with all environmental media managers, to include Air Quality, Hazardous Waste, Hazardous Materials, Installation Restoration, Recycling Program, Water Quality, Natural Resources, Cultural Resources, and the National Environmental Policy Act (NEPA) Program. Ensured all necessary documentation, administrative records, permits, regulatory compliance documents, audits, NEPA documents, Memos-For-Record (MFRs), and any other official correspondence, document or record was properly accounted for, managed, and filed in the EMS system according to its corresponding program. Provided a guarterly Command Staff level presentation on the installations status in regard to EMS. Reviewed and updated the installation EMS procedures/supplements at least annually in accordance with regulation. Assisted the Environmental, Safety and Occupational Health Council (ESOHC) in installation management review and the environmental inspection process for all environmental media. Recommended facility and process improvements to reduce environmental liabilities, improved health and safety, reduced operating costs and energy consumption, and ensured the viability and sustainability of the installation to continue to support flight operations

### **Air Quality Program Manager**

Department of the Navy Environmental Management Division (EMD), NAWS China Lake, CA May 2019 to March 2020

Served as the Air Quality Program Management Lead for the Environmental Management Division (EMD) of the Public Works Department (PWD), at Naval Air Weapons Station (NAWS) China Lake, a large, complex, multi-mission military installation totaling over 1.2 million acres of environmentally sensitive land and \$3 billion in infrastructure. Managed 3 Clean Air Act (CAA) Title V Permits and over 300 Permits to Operate. Supervised and directed work load for 1 GS-12 Air Quality Specialist and 1 full-time equivalent (FTE) contractor conducting air quality reviews, writing installation air quality

policy, and the development and processing of air quality documents, reports, permit applications, and permit modifications. Routinely reviewed, interpreted, and implemented CAA and California Air Resource Board (CARB) laws and regulations. Ensured proper permitting under Title V of the CAA for various projects and activities using generators, painting/coating activities, boilers, and other emitting actions. Ensured all projects implemented proper dust control measures to minimize potential particulate matter emissions. Oversaw air quality training for Aerospace National Emissions Standards for Hazardous Air Pollutants (NESHAP) reporting requirements and air quality formaldehyde testing of generators. Performed conformity analysis during NEPA review on applicable projects located in a federal non-attainment area for the potential to impact air quality and identify mitigation measures necessary to ensure no adverse impacts to air quality.

Frequent coordination with NAVAIR (the largest tenant of NAWS China Lake) Air Quality Specialist and their Environmental Management Program to ensure projects and activities are properly permitted and in compliance with the CAA and CARB. Served as the liaison between Naval Facilities Engineering and Expeditionary Warfare Center (NAVFAC EXWC) and NAWS China Lake, providing specialized programmatic compliance support for the Air Quality Program. Supported Mojave Desert Air Quality Management District (MDAQMD), Eastern Kern Air Pollution Control District (EKAPCD), and Great Basin Unified Air Pollution Control District (GBUAPCD) inspections of operating permits, activities and permitted locations under Title V of the CAA; and inspections on mobile generators permitted under CARB's Portable Equipment Registration Program (PERP).

Ensured that the installation, operators, and tenant activities remain in compliance with constantly changing guidelines and standards while in support of full spectrum research, development, testing, training, systems evaluation, engineering and experimentation of weapons systems associated with air warfare, missiles and missile subsystems, aircraft weapons integration, and electronic warfare systems. Recommended facility and process improvements to reduce environmental liabilities, improve health and safety, reduce operating costs and energy consumption, and ensure the viability and sustainability of the installation to continue to support fleet operations. Ensured sound stewardship of the natural and built environment in a high-ops tempo of over 1500 tests per year for base-wide military activities, construction and maintenance projects worth over \$320 million dollars annually. Represented China Lake in negotiation, justification and

defense of environmental activities to State and local governments, public interest groups, members of the business community and the general public.

Identified emergent operations-related issues that need to be coordinated with various agencies, and coordinate with others on station as applicable to develop appropriate responses. Obtained district permits for new equipment/operations as needed by customers. Modified district permits as needed by customers' changing operations. Ensured compliance with applicable statutes and regulations while minimizing potential issues due to future growth/flexibility in operations. Prepared Title V Operating Permit applications, certifications, and correspondence, including notifying EPA if equipment is added to an area with a signed Title V permit. Reviewed draft Title V permits proposed by the Districts, coordinated with NAVAIR, Region and other stakeholders. Provided comments and negotiate with regulators as appropriate. Performed ongoing compliance monitoring and documentation as required in the Title V permits.

Performed ongoing compliance monitoring and documentation as required by applicable

National Emissions Standards for Hazardous Air Pollutants (NESHAPs). Collected operational data and materials usage data for use in calculating emissions inventories. Collated operational data into monthly usage reports in areas where this is required. Coordinated contracting, performance, and reporting for required source-testing. Coordinated with area POCs, tenant commands, and district enforcement staff for annual and other inspections. Escorted inspectors and provided information as needed. Consulted with facility POCs to answer their compliance questions. Acted as point of contact between facility POCs and the regulatory agencies. Reviewed draft NESHAPs to determine applicability to China Lake and provide comments via the Services Steering Committee as appropriate. Reviewed final NESHAPs upon promulgation to determine applicability, coordinated with area POCs, and submitted notifications, as necessary. Consulted with local, state, and federal regulators and Navy POCs on compliance issues.

Served as the Navy's representative for Air Quality Study Policy Committees. Maintained working relationships with other member agencies, including California Air Resources Board, Environmental Protection Agency (EPA Region 9), Mojave Desert Air Quality Management District (MDAQMD), Eastern Kern Air Pollution Control District (EKAPCD), and Great Basin Unified Air Pollution Control District (GBUAPCD), Western States Petroleum

Association, Pacific Gas and Electric, the Electric Power Research Institute, Nisei Farmer's League, Independent Oil Producer's Agency, and other local agencies and councils. Managed the Air Visibility Program, including oversight of air quality sampling network, proper use of data collected, prioritization and selection of research projects, coordination with contractors and program sponsors. Performed conformity applicability analysis for each project coming through the Department for environmental approval. Identified emergent regulatory issues, worked with operations POCs to assess potential impact to China Lake, provided appropriate response. (NAAQS attainment issues, SIP development, local/state/federal rulemakings, etc.) Developed, proposed, and implemented response strategy, coordinated with Command, REC, Region, NAVAIR and other agencies as appropriate. Served on regional or national working groups as appropriate.

## NEPA Coordinator, Environmental Planning Program Manager

Department of the Navy Environmental Management Division (EMD), NAWS China Lake, CA Nov. 2017 to May 2019

Served as NEPA Coordinator and Environmental Planning Program Manager Lead for EMD at NAWS China Lake. Supervised 2 FTE contractors conducting environmental reviews, writing environmental policy documents, and development and processing of environmental planning documents. Routinely interpreted and implemented environmental laws and regulations including; The National Environmental Policy Act, The Clean Air Act, The Clean Water Act, The Endangered Species Act, The National Historic Preservation Act, The Resource Conservation and Recovery Act, Migratory Bird Treaty Act, Comprehensive Environmental Response, Compensation, and Liability Act, and many others. Applied judgement and discretion in determining, interpreting, and revising existing policy and regulatory guidance for use by others within and outside the agency, to include contractors. Extensive integration with an interdisciplinary environmental team including Air Quality, Installation Restoration, Natural Resources, Cultural Resources, Hazardous Waste, and other Physical Sciences and Engineering. Completed over 300 project reviews and wrote over 200 Categorical Exclusions (CATEX) annually in accordance with the National

Environmental Policy Act (NEPA). Frequently coordinated with the NAWS China Lake EMD management programs to ensure projects and activities were properly permitted and in compliance with all applicable regulations. Ensured all projects implemented proper mitigation measures to avoid or minimize potential impacts to the public, resources and/or the environment.

Served as Environmental Planning and NEPA Lead for numerous high visibility/high value projects. Worked with NAVAIR to develop new support facilities for the F-35 Joint Strike Fighter and coordinated all NEPA requirements. Provided baseline needs for operation and support to include: maintenance hangers, taxiways, engineering, administration, laboratories, data communications, and other infrastructure and support facilities for NAVAIR and Foreign Military and Coalition Warfare Programs. Supported multiple photovoltaic installation projects providing much needed energy base wide in support of full spectrum research, development, testing and evaluation (RDT&E). Provided NEPA coordination for the construction of a new \$3 million radar support facility, including all infrastructure and utilities needed for operation. Coordinated with subject matter experts in 4 divisions (Facilities Management, Facilities Engineering and Acquisition, Production, and Environmental Management) and 11 branches (Environmental Engineering and Operations, Resources Planning and Management, Transportation, Project Management and Engineering, Acquisitions, Project Development and Engineering Service, Utilities Maintenance, Energy Monitoring and Management, Emergency Services, Recurring Maintenance, Requirements, and Asset Management). Ensured that the installation, operators, and tenant activities remained in compliance with constantly changing guidelines and standards, such as for the multi-million dollar base wide infrastructure repair projects involving electrical distribution systems, roofing, roadway reconstruction and pavement repair.

Wrote, reviewed and commented on Environmental Assessments (EA) and Environmental Impact Statements (EIS), including the congressionally mandated expansion of over 33,000 acres for electronic warfare research, testing, development, and evaluation. Served as Environmental Lead for all installation EA and EIS project teams. Represented the Environmental Department and acted as liaison to tenant commands for all project and NEPA reviews installation wide. Resolved all environmental issues on projects by coordinating with resource specialists, engineers, active military members and tenant environmental coordinators, such as the multi-million dollar demolition of asbestos, lead based paint, and mold contaminated

Bennington Theater. Provided annually over 100 briefings and executive summary memos to installation commanding office and tenant commands.

# **Environmental Engineering and Operations Branch Head** (Acting),

## **Supervisory Environmental Protection Specialist**

Department of the Navy Environmental Management Division, China Lake, CA June 2018 to December 2018

Served as Acting Compliance Branch Head and Supervisor for the Environmental Engineering and Operations Branch of EMD, directing compliance operations which provided complex, technical services directly affecting all activities and process installation wide. Oversaw the Hazardous Waste Storage and Transfer Facility (HWSTF) operations. Ensured HWSTF personnel conducted daily hazardous waste pick-up, transfer, storage, profiling, processing, and shipping for more than 300 satellite and 90 day waste accumulation sites. Performed Hazardous Waste Program Management, conducting hazardous waste permitting and management processes for more than 2,500 chemical types, over 300 hazardous waste accumulation sites, and Open Burn / Open Detonation sites. Oversaw the Environmental Management System (EMS) Program installation wide, conducting analysis and documentation of environmental compliance for all environmental media. Supervised the Above ground and Underground Storage Tanks (UST/AST) Management Program, conducting inspections and reviews of hundreds of discharge sites and tanks throughout the installation. Oversaw the Audits and Compliance Program, conducting evaluations, reviews and audits for over 300 hazardous waste accumulation sites. Oversaw chemical analysis for an NCIS criminal investigation of VOC contamination under EPA Method 8260. Spill Response Lead for EMD, to include responding to Oil and Hazardous Substance (OHS) spills, coordinating with contractors to ensuring proper clean-up, transportation, disposal of hazardous waste, and oversaw program management reporting to regulatory agencies. Participated as main Point of Contact for EMD and as an Evaluator for installation-wide OHS Spill Response training exercises.

Directly supervised two GS-13, three GS-12, three GS-11, one GS-09 and one WG-7 personnel. Evaluated work performance, setting short and long-term

priorities and schedules for work completion, and exercised technical and administrative oversight responsibilities for 10 personnel at NAWS China Lake EMD. Took appropriate action to correct performance issues. Made decisions on work problems, training needs and requests, overtime, employee travel, employee leave requests and similar issues. Certified timecards, leave requests, compensation time and overtime. Received, addressed and resolved complaints from employees including award recognition concerns, promotion concerns, negative interactions between personnel, workload distribution and complaints on personnel behavior. Effected disciplinary measures, such as warnings and reprimands, to include, addressing inappropriate behavior towards interns, redirecting personnel interactions and emphasizing potential consequences for unacceptable behaviors. Identified developmental and training needs of employees and ensured actions were taken to arrange for the necessary training. Conducted one-on-one interviews and work load assessments for all 10 personnel. Conducted weekly branch meetings to disseminate directives, assign tasks, plan work schedules and follow up on previously assigned action items. Participated in hiring interview panels and provided grading feedback on potential candidates.

Oversaw the coordination, identification, and submission of environmental program requirements with Regional program leadership. Ensured the management and timely execution of funding for installation environmental projects, permits and fees. Developed requirements, project narratives, and statements of work. Prepared technical specifications for Architectural-Engineering and Service contracts. Coordinated delivery of environmental products and services in conjunction with the Region. Reviewed environmental deliverables for quality, completeness, and technical accuracy. Performed field quality assurances of contracted work. Coordinated activities with Regional counterparts to raise awareness of program issues, advocated for resources, assisted in prioritizing resources, and ensured financial viability and fiscal accountability. Initiated processes for contract support for the HWSTF due to a 50% reduction in man-power by coordinating with Regional contract leadership, resulting in contract integration of the current planned Business Operations Support Contract (BOSC). Initiated a search for a long-term consolidated HWSTF location, providing improvements for safety, administrative activities, health and wellbeing of personnel, and proper storage of hazardous waste. Analyzed monthly net operating results and variances for the HWSTF to include commodities, overhead, additional costs and net operating results.

Routinely attended meetings with the department and tenant commanding officers and the installation commanding officer. Provided weekly briefings to the Public Works Officer, bi-weekly briefings to the Region and the Naval Air Weapons Center Weapons Division (NAWCWD), monthly briefings to the Commanding Officer, and ad hoc briefings to higher level senior leadership. Provided Community Outreach to schools, the installation populous, and the local community to promote awareness and encourage the use of environmentally friendly products and technologies. Delivered environmental training to installation, tenant, contractor, and transient personnel in-person and through various multi-media outlets. Oversaw development of a number of job hazard analysis checklists and the health and safety plan for the HWSTF; and utilized these documents implementing safety controls at the facility which provided safety and environmental liability protection for the installation. Researched, developed and wrote the Installation Spill Response Plan, providing a streamlined response process to all spill situations and a smooth transition to the Incident Command System (ICS) process.

## **NEPA Planner, Environmental Protection Specialist**

Federal Highway Administration – EFL, Sterling, VA Nov. 2014 to Nov. 2017

Environmental NEPA Lead for numerous multi-million dollar transportation and infrastructure construction projects, such as bridge repair/construction, roadway repair/reconstruction, culvert installation, stormwater drainage and catchment basins, concrete and pavement repair/construction, parking lots and trails. Researched and conducted all applicable processes involved in environmental permitting and NEPA coordination for over 30 states. Applied a scientific knowledge of the principles, concepts, and practices relating to environmental protection programs as they concern problems of organizing, planning, funding, and controlling environmental activities. Extensive integration with an interdisciplinary environmental team including Biologists, Environmental Scientists, GIS Specialists, Hydrologists, Soil Scientists, Structural Engineers, and Civil Engineers.

Fulfilled Contracting Officer Representative (COR) duties, to include creating Statements of Work (SOW), Independent Government Estimates (IGE), and project coordination with contractors. This included participating as a Source

Selection Team member providing technical advice and assistance to functional area personnel involved in developing and revising specifications. Performed inspection and acceptance for the Government, ensuring performance/delivery was in accordance with contract and order requirements. Conducted contract quality assurance with responsibility for directing, developing and implementing quality assurance policies that support contract surveillance management. Accurately performed analysis to identify deficient areas to assist in reducing undesirable performance levels. Advised and provided senior leadership with decision support analysis and guidance to meet a wide variety of complex mission requirements. Monitored compliance with contractual and funding processes and procedures utilized in the development, delivery and maintenance of products and services.

Assisted in developing, analyzing, evaluating, and modifying all environmental programs, policies, and procedures. Engaged in the full range of the NEPA planning, consultation and documentation processes. Prepared, analyzed and reviewed all aspects of Categorical Exclusions (CATEX), Environmental Assessments (EA), and Environmental Impact Statements (EIS). Coordinated with various stakeholders, to include Federal agencies such as the National Park Service, Fish and Wildlife Service, Forest Service, United States Army Corps of Engineers, as well as tribal, state, and local governments and agencies.

Coordinated the preparation, review and approval of various permit applications and permit modifications, working with other agencies at the Federal, State, County and local levels. This included such activities as the National Pollutant Discharge Elimination System (NPDES) for treatment and reduction of point source pollution, USACE Section 404 permit for discharge of material into water bodies and wetlands, Section 401 Water Quality Certification for protection of aquatic resources, Stormwater Management for mitigation of sediment discharge, Best Management Practices (BMPs), and all other state and local permits. Reviewed and analyzed all engineering plan sets for adherence to all Federal, state and local environmental laws, regulations and permitting agreements.

## **Secondary School Science Teacher**

Alief Independent School District, Houston, TX Aug. 2009 to Aug. 2014

Instructed and guided students to achieve proficient understanding of the 4 core science subjects (Biology, Chemistry, Physics, and Earth Science). Educated ESL (English as Second Language) students in science concepts and English grammar, utilizing bilingual pedagogical approaches and my fluency in Spanish. Established and maintained strong lines of communication with parents and guardians. Developed and executed daily/weekly lesson plans to ensure student learning was in accordance with Federal Level Common Core and Texas State Level Performance Standards. Facilitated the development of character, ethics and community in the classroom. Completed all grading and assessments by providing prompt, high-quality, personalized feedback on assignments and exams. Provided individualized support through before, and after, school tutoring programs.

Created and implemented academically rigorous lessons, lab investigations and assessments. Participated in various curriculum, learning resource and textbook evaluation, assessment and incorporation committees. Developed and revised a curriculum that aligned with state and Federal standards. Developed an extensive knowledge of the subject curriculum and laboratory work. Committed to constant professional and personal growth through working closely as part of a team of teachers. Assisted in the development of curriculum standards and mapping for the district. Traveled to, and participated in, staff meetings and professional development sessions.

## **Logistics Specialist**

U.S. Army Reserves, Ft. Hood, TX Jan.1999 - Mar.2007

Supervised and managed six personnel during war-time deployment for warehouse and logistics operations at the Balad, Iraq Camp Anaconda Supply Support Activity during Operation Iraqi Freedom II (OIF II). Served as Squad leader for 4<sup>th</sup> Squad, 4<sup>th</sup> Platoon M Co. 158<sup>th</sup> Aviation Regiment, supervising, training and leading six personnel providing support for all depot level aircraft maintenance activities. Gained experience with, and trained other soldiers on, a variety of vehicles, trucks, trailers, and forklifts and their operations. Trained over 100 military personnel on Army Marksmanship, M16A2 Battlefield Maintenance, Battlefield First Aid, and Army Risk Management.

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Coordinated supply, organization, warehousing and transportation for over \$100 million worth of aircraft and helicopter repair parts. Served as the warehouse section point-of-contact for hazardous waste storage and disposal. Utilized and trained others on the use of various electronic devices for supply inventory and processing. Managed thousands of work-orders and supply requests in accordance with US Army regulations. Served as the hazardous waste accumulation Point-of-Contact (POC) for the warehouse operations. Successfully completed a 15-month war-time deployment to Balad, Iraq (Camp Anaconda) in support of OIF II (2004-2005), receiving multiple medals and commendations.

## **Education:**

### The University of Idaho, Moscow, ID

Master of Science in Environmental Science, December 2013

### Texas A&M University, College Station, TX

Bachelor of Science in Interdisciplinary Studies in Math and Science, August 2009

## **Professional Training:**

- FHWA Contracting Officers Representative (COR) Training
- · ACHP The Section 106 Essentials Training
- NEPA and The Transportation Decision-making Process
- Design and Implementation of Erosion and Sediment Control
- Applying Section 4(f): Putting Policy into Practice
- WTI Basic Wetland Delineation Training
- USACE PCC3 Environmental Considerations in Planning (NEPA)
- Naval Civil Engineer Corps Officer School NEPA Application
- Completed 30 Modules of California Air Resources Board Air Academy Training
- Completed 28 Modules of EPA Air Pollution Training Institute (APTI)
   Training
- · NAWCWD Hazardous Waste Training for Generators at China Lake
- NAVFAC Commitment to Accountability Supervisory and Leader Training
- Completed 24 modules of Department of the Navy Supervisory Training

- Completed Hazardous Materials and Waste Ground Shipper (DOT) Training
- Completed 40 Hour Hazardous Waste Operations and Emergency Response Training
- Completed 40 Hour Air Force Institute of Technology Water Quality Course
- Completed 8 Hour HAZWOPER Refresher Certification

## **Honors, Achievements and Medals:**

- Achieved the rank of Sergeant in the US Army Reserves, 2004
- Received the Army Achievement Medal during war deployment, 2005
- Received the Army Iraq Campaign Medal, 2005
- Received the Global War on Terrorism Service Medal, 2005
- Received the Combat Action Badge, 2005
- Received the Army Commendation Medal, 2006
- Made Commandants List (top 3) in Army Non-Commissioned Officer training, 2006
- Received the Distinguished Student Award at Texas A&M University, 2008
- Named to the Dean's Honor Roll at Texas A&M University, Spring 2009
- Received Alief ISD Area Teacher of the Month, November 2009
- Received Alief ISD Area Teacher of the Month, April 2013
- Received Alief ISD Area Teacher of the Month, May 2014
- FAI Level II (FAC-COR) Contracting Officer Representative Certified, April 2016
- NAVFAC-SW Commanders Challenge Coin for "Superior Performance", May 2018
- Installation Commanding Officers Challenge Coin for "Excellence", May 2019
- Mountain Home Air Force Base Civilian of the Quarter Oct-Dec 2020

## **Clearance: Secret (current)**



#### WORK EXPERIENCE:

## U.S. Army Corps of Engineers (USACE)

Albuquerque District, NM, United States (SPA) All Position Hours: Full-time 40 hours/week

#### Senior Regulatory Project Manager (GS-0401-12)

Timeframe: November 2020 to present

Supervisor: Chris Parrish (2020 - May 2022), Christina Schroeder (Acting - June

2022 to present)

## Regulatory Project Manager (GS-0401-11)

Timeframe: October 2018 - October 2020

Supervisor: Kelly Allen (2018), Tarrie Ostrofsky (2018 – 2019), Chris Parrish

(2019 - 2020)

#### **Department of the Army Intern** (GS-0401-7, GS-0401-9)

Timeframe: October 2016 - September 2018

Supervisor: Cecilia Horner

#### U.S. Forest Service

All Position Hours: Seasonal Full-time 40 hours/week

#### Forestry Sciences Laboratory - Wenatchee, WΑ

Forestry Technician (GS-5)

Timeframe: June 2016 - September 2016

Supervisor: Dave Peterson

## Rocky Mountain Research Station - Boise, ID

Hydrologic Technician (GS-5)

Timeframe: June 2015 - September 2015

Supervisor: Tom Black

#### USACE

Regulatory Project Manager (PM): Responsible for overall management, development, analysis, coordination, monitoring, and execution of assigned projects in the USACE Regulatory Program pursuant to the administration and implementation of Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act of 1899 (RHA). This includes providing guidance to potential applicants/permittees concerning jurisdiction and regulatory requirements in order to avoid and minimize impacts to waters of the U.S. and to compensate for unavoidable impacts per the terms of the Mitigation Rule; evaluating proposed projects to identify potential impacts to the aquatic environment including rivers, streams, wetlands, and special aquatic sites; documenting and consulting with appropriate agencies and Tribes for impacts to cultural resources, threatened and endangered species, and public interest factors; consulting Page 153 of 192

and coordinating with county, state, tribal, and federal resource agencies; participating in the preparation of Environmental Assessments, Environmental Impact Statements and other related permitting documents; and investigating alleged violations and determining course of action to rectify unauthorized work. Work often involves making decisions on complex, controversial, and environmentally sensitive Department of the Army permit applications, and requires the preparation of complete electronic administrative records (ARs) on all Regulatory Program actions with required records in correct sequence and efficient organization, as well as prompt and accurate entries in the Regulatory project database (i.e. ORM). Workload typically involves a substantive and ongoing review of 10 – 20 of the pending actions described above and requires organization, attention to detail, and timely decision making.

#### PERFORMANCE/AWARDS

### 2020 Annual Appraisal

• Summary Rating: 4.6/5.0

· Rating of Record: Outstanding

 Awards: Performance-Based Cash Award, Meritorious Step Increase, Promotion to GS-12

#### 2021 Annual Appraisal

• Summary of Rating: 5.0/5.0

Rating of Record: Outstanding

Awards: Performance-Based Cash Award, Product Delivery Team of the Year

## 2022 Annual Appraisal

• Summary of Rating: 5.0/5.0

· Rating of Record: Outstanding

• Awards: Performance-Based Cash Award

#### **ACTIONS/ACCOMPLISHMENTS:**

Served as the District's database (ORM) representative from October 2018 -November 2021. The ORM database is used nationally to track project timelines, consultations, impacts to aquatic resources, unauthorized activity resolution, outreach, jurisdiction, and compliance. Responsibilities included participating in monthly meetings with HQ staff; drafting and updating template documents based on organizational changes, policy guidance, and court decisions; providing trainings for database updates to District staff; providing various monthly, quarterly, and end of year reports to supervisors; tracking and updating Mission Success Criteria metrics used to evaluate program performance; compiling permit actions within watersheds and responding to data requests from HQ and other USACE departments; coordinating with Office of Counsel to respond to Freedom of Information Act (FOIA) requests; assigning roles and permissions for new/departing employees; providing training for internal database tools such as Geographic Information System (GIS) viewers, Cumulative Effects Analysis, bulk aquatic resource uploads, and the CWA Section 408 tracking program; conducting quarterly audits of administrative record files, and providing Quality Assurance/Quality Control for data entry associated with over 750 annual permitting/enforcement actions from 20+ staff members. Currently serving as the mentor for the new database representative.

- Assisted in execution of Operation Navajo Gold with other federal agencies including the DEA, FBI, DHS, DOJ, and EPA's Criminal Investigation Unit. Identified unauthorized activities associated with illegal marijuana farms on Navajo Nation at over 20 hazardous locations, conducted Ordinary High-Water Mark (OHWM) and wetland delineations on each site using USACE technical reference manuals, identified and analyzed historical satellite imagery, and drafted a report with a recommendation for administrative penalties that was provided to EPA and DOI legal representatives. Case is expected to go to trial and testimony to support recommendations will be required.
- Area of Responsibility includes northwestern New Mexico, Navajo Nation, and Navajo Nation Trust Lands. Routinely work with a broad variety of applicants in rural and urban areas that include private property owners, cities, towns, irrigation associations, and high-profile industry representatives pursuing solar farms, oil and gas infrastructure, railroad and highway infrastructure, mining activities, and largescale habitat establishment or mitigation projects.

## **Developing Natural Resource Management Plans**

- Served as the Team Lead for consultation and reissuance of the 2021 Nationwide Permit (NWP) permits for Navajo Nation and provided data summaries for Navajo Nation, New Mexico, and Texas that encompassed 5 years of work type, permits used, impact areas and amounts, and mitigation requirements for 58 reissued permits. Analysis required compilation and sorting of multiple spreadsheets, associated with 3000+ projects, to project expected use and cumulative impacts over a 5-year timeframe for the purpose of establishing Regional Conditions and creating/revising programmatic agreements with Federal, State, and Tribal Agencies.
- Reviewed trends in NWP usage within Navajo Nation associated with impacts to aguatic resources and collaborated with other USACE Districts to draft regional policy guidelines applicable to Navajo Nation for the purpose of addressing identified deficiencies and preserving special aquatic sites. Recommendations were subsequently approved and adopted by the South Pacific Division (Los Angeles, Sacramento, San Francisco, and Albuquerque Districts) leadership.
- Served as the USACE point of contact for the 2019 U.S. Forest Service (USFS) Northern New Mexico Riparian, Aquatic, & Wetland Restoration NEPA-Project Category-Design Criteria Workshop with various National Forests (NF). Purpose was to create a bulk permitting/compliance mechanism for a variety of categorized restoration activities expected to be completed by NFs within the State of New Mexico that would aid in the recovery of federally listed fish species and to improve water quality. Projects were categorized by purpose (aquatic organism passage, floodplain, in-stream, etc.) and an analysis of viability for a programmatic agreement between USACE and USFS was assessed using historic project submissions. Served as a cooperating agency on the associated Environmental Assessment.

#### <u>Developing and Implementing Long-Term Monitoring Protocols</u>

Routinely provide review and on-site concurrence of Ordinary High Water Mark delineations using a technical reference - A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States. This document presents a method for delineating the lateral extent of non-

- wetland waters in the Arid West using stream geomorphology and vegetation response to the dominant stream discharge.
- Routinely provide review and on-site concurrence of wetland delineations using a
  technical reference Regional Supplement to the Corps of Engineers Wetland
  Delineation Manual: Arid West Region (Version 2.0). This document provides
  technical guidance and procedures for identifying and delineating wetlands that
  may be subject to regulatory jurisdiction under Section 404 of the Clean Water Act
  or Section 10 of the Rivers and Harbors Act. Wetlands, as defined by USACE, are
  based on a three-factor approach involving identification of hydrophytic vegetation,
  hydric soils, and wetland hydrology.
- Annually review monitoring reports associated with authorized projects pertaining to habitat creation/improvement, mitigation, ESA/NHPA requirements, or any other special conditions included on permit verification letters. Monitoring requirements are specific to each project and the compliance evaluation procedures vary to reflect the seriousness of the potential for adverse impacts on the aquatic ecosystems posed by specific dredge or fill material discharge activities. All mitigation monitoring is required for a minimum of 5 years or until such time that USACE determines that Performance Standards have been met. Any deficiencies identified in monitoring reports or site visits are required to be addressed within 30 days through agreed upon adaptive management measures. Currently responsible for mitigation and monitoring requirements associated with the Navajo Coal Mine; which has been providing annual monitoring reports since 2012.
- All monitoring proposals are required to use the USACE South Pacific Division's Uniform Performance Standards to assess the objectives associated with the proposal. These performance standards include hydrologic (width, depth, sinuosity, storage), physical (buffers, stability, woody debris), fauna (presence), flora (survivorship, diversity, cover), and water quality (pollutant reduction, invertebrates) categories and are assigned based on applicability of the aquatic resource or mitigation in question. Currently responsible for reviewing monitoring reports associated with seven habitat restoration projects and four mitigation sites.

## Preparing Specific Action Plans to Protect and Manage Physical or Abiotic Resources

- Regularly work with project proponents and consultants to modify proposals
  associated with preservation, mitigation, or restoration work. Proposals are required
  to identify a purpose, current conditions including channel form and dimensions
  (e.g., typical channel cross-sections and longitudinal profile data), watershed size,
  floodplain condition and inundation frequency, existing wetland and riparian areas,
  habitat types, stream substrate, bed load and flow regime. Proposals are also
  required to include a description of known impacts that may have contributed to a
  degraded condition at the project site (e.g., excessive use by livestock, artificial
  structures or channelization, road drainage, etc.) and an ecological reference
  location (or reach) is necessary to identify how the conceptual model will improve
  the aquatic resource.
- Annually perform over 15 on-site inspections of authorized projects on public land, private property, federal military installations, federal government laboratories, and commercial construction sites to ensure compliance with program requirements including management of water flows, erosion and sediment controls, proper maintenance, mitigation agreements, public safety, compliance with tribal and

environmental laws, and any project specific special conditions. Projects involving habitat restoration, mitigation, monitoring, or significant impacts are prioritized. Drafted compliance documentation for the administrative record following inspections that included technical reports, site photos, interviews and other correspondence with project proponent, recommendations for resolution of non-compliance issues, and provided follow up briefings to immediate supervisors (Monthly) and District Commanding Officer (Quarterly).

<u>Collaborating or Coordinating Actions With Others to Provide Broad Strategies for Abiotic</u> Resource Protection

- Served as the sole Project Manager in the Albuquerque District from 2018 to 2022 (May) responsible for working with Navajo Nation Environmental Protection Agency (NNEPA) on CWA water quality certification requirements when authorizing projects and resolving enforcement actions. During this timeframe Navajo Nation reservation boundaries were split across multiple USACE Districts (Los Angeles, Sacramento, Albuquerque), and in the spring of 2022 Navajo Nation requested that the tribal boundaries be consolidated under the Albuquerque District to improve communication and program efficiency. Individual district data was provided to the Commanding General of the USACE South Pacific Division using the ORM database and on June 26, 2022, the realignment of district boundaries was approved. Currently serving as the only USACE point of contact for the entirety of Navajo Nation responsible for reviewing over 150 proposed projects annually. Work includes coordinating with multiple Tribal staff members across large areas of New Mexico, Arizona, and Utah and often requires coordination with multiple Environmental Protection Agency (EPA) Regions (6, 8, 9).
- Drafted an extensive Geographic Jurisdictional Report for a watershed (HUC 12) within Tribal land that required collaboration with multiple agencies/parties in response to an enforcement action. Report contained multiple years of satellite imagery, interviews conducted with multiple parties, photographs, maps, Ordinary High Water Mark delineations, timelines for resolution, and the utilization of established science concerning biological, chemical, and hydrologic characteristics to be used as evidence for asserting jurisdiction at multiple locations within the watershed. Branch Chief provided report to other USACE Districts as an example for asserting jurisdictional authority across relatively large areas.
- Led the Albuquerque District in resolution of non-compliance and unauthorized activities in 2019, 2020, and 2021. Non-compliance action resolution included review of annual monitoring reports, implementation of adaptive management for ongoing restoration or monitoring activities where deficiencies were identified, and guidance for meeting established expectations. Enforcement action resolution included identification of baseline environmental standards, establishing timelines for document or information requests, scheduling meetings and collaborating with stakeholders, and drafting mitigation and settlement agreements in accordance with existing policy.
- Responsible for all Section 10 RHA permitting activities within Navajo Reservoir.
   Projects require extensive coordination with New Mexico State Parks, the Bureau of Reclamation, the general public, and private industries. Projects typically include marina expansion/improvements, removal of submerged vessels or other

- obstructions to navigation, construction/replacement of permanent boat ramps, construction of transportation crossings, and habitat restoration projects.
- Established good working relationships with various stakeholders including EPA Regions 6, 8, and 9; other federal agencies including the USFWS, the Bureau of Reclamation, the Bureau of Land Management, the U.S. Forest Service (Cibola, Carson, Santa Fe National Forests), the Bureau of Indian Affairs, the National Nuclear Security Administration, the Federal Emergency Management Agency; Tribes including the Navajo Nation and the Ute Mountain Ute Tribe; State entities including the New Mexico Environment Department, New Mexico State Parks, the Colorado Department of Health and Environment, State and Tribal Historic Preservation Officers, and numerous county officials.

### Preparing Requests for Proposals and Managing Budgets

- Provided numerous proposals to support the Infrastructure Investment and Jobs Act including the reorganization of Albuquerque District Regulatory boundaries to include the entirety of Navajo Nation; updating emergency permitting procedures through the creation of a Regional General Permit specific to Navajo Nation; the purchase of unmanned aerial vehicles and software as well as the fixed wing collection of LiDAR data across Arizona and New Mexico; the creation of a Letter of Permission for sediment removal for Burlington Northern and Santa Fe Railway and the New Mexico Department of Transportation to resolve multiple ongoing unauthorized activities while allowing for transportation needs; creation of a Tribal viewer (GIS layers/resources to enable enhanced Tribal participation in Regulatory Program actions); and a website update to identify changes associated with realignment of District boundaries. All proposals included a scope of work, purpose and need, timelines, and a cost estimate.
- Coordinated with the District Chief and the Program Budget Analyst in 2020 to
  prepare a proposal to USACE HQ for realignment of USACE District boundaries and
  employees to add additional staff and area of responsibility to the Albuquerque
  District associated with the western slope of Colorado. Provided ORM data of
  Mission Success Criteria metrics relative to performance per employee to support
  the proposal that realignment would increase program efficiency. Supported the
  proposed geographic change in area with documented hydrologic connectivity
  across similar climate types in adjacent watersheds. Following approved
  realignment, worked with new Branch Chief to outline a redistribution of work
  responsibilities, and proceeded to schedule and conduct a series (5) of internal
  trainings associated with new roles and responsibilities for over 12 new staff
  members.
- Submitted a 2022 Statement of Need to the USACE Army Engineer Research and Development Center requesting an analysis of the function of aquatic resource types (perennial, intermittent, ephemeral, wetlands) in the southwest. Request included a purpose and need, the extent of need, stated goals, a list of relevant topics, and suggestions identifying appropriate instrumentation (piezometers, weirs, stream gages, tipping buckets) and variables to be monitored (precipitation, sediment transport, soil moisture content, vegetation and wildlife surveys).

**Department of the Army Intern:** The DA Intern Program provides a full range of education, training and professional development to build the competencies interns need for missions across all commands and other separate Army agencies and organizations by providing opportunities to work internally within USACE in order to gain experience in other sections of the agency as well as working outside of USACE to effectively promote working relationships with other entities. It is a two or three-year, full-time, entry-level, permanent civilian training and development program, and interns graduating from this program have a strong foundation for future professional growth and advancement.

#### **ACTIONS/ACCOMPLISHMENTS:**

- Served in a 30-day detail with the National Nuclear Security Administration (NNSA) at Los Alamos National Laboratory (LANL)
  - Assessed functionality and maintenance needs of high profile-long lived projects such as the Los Alamos Weir, Pueblo and DP Canyon Grade Control structures; Supplemental Environmental Projects (SEP); construction projects subject to 401/404 permitting; and USACE construction activities at LANL.
  - Met with LANL contractors and Environmental Compliance group to discuss OHWM determinations for future projects and to identify jurisdiction in the field as well as permitting requirements.
  - Discussed the use of other indicators such as stream gages and modeling results to produce inundation areas where the landscape was heavily disturbed by fire.
- Served in a 90-day detail with the USACE Environmental Resources Section
  - Participated in drafting NEPA documents including EAs, EISs, FONSIs and reviewed completed documents for other biologists.
  - Attended site visits for Corps projects including a habitat restoration project and a recreation project on the Rio Grande and worked to clarify hydrology components of NEPA documents.
  - Drafted a Biological Assessment for a habitat restoration project after consulting with endangered species leads at the USFWS.
- Served in a 30-day detail with the USFWS Endangered Species Office (Region 2)
  - Became familiar with what USFWS expectations and priorities are for consultation process including deliverables and associated documentation.
     Participated in consultation with species leads over impacts to endangered species (Southwestern Willow Flycatcher, Rio Grande Silvery Minnow). Identified a methodology to quantify "take" using baseline information and expected temporary and permanent impacts resulting from a USACE project.
  - Drafted and finalized a Coordination Act Report between the USFWS and USACE for a habitat restoration project.
- Served in a 90-day detail with the U.S. Forest Service Cibola Office
  - Sized 20 culverts for replacement in ephemeral, intermittent, and perennial streams in the Cibola NF using USGS StreamStats software, Water Erosion Prediction Project (WEPP), and hand calculations using the USGS document Analysis of the Magnitude and Frequency of Peak Discharge and Maximum Observed Peak Discharge in New Mexico.
  - Utilized the interagency (BLM, USFS, NRCS) protocol *Proper Functioning Condition* (PFC) for assessing current conditions of lentic and lotic sites.
  - Participated in Burned Area Emergency Response (BAER) training and hydrologic modeling to assess impacts resulting from flooding. Created watershed maps of burned areas in Cibola NF at 6th order HUC level showing land ownership, topography, streams, and burn intensity using ArcGIS. Using ArcGIS, created boundaries for small watersheds within fire perimeter for analysis of localized impacts. Used the Water Erosion Prediction Project's Post-

Fire Erosion Prediction (WEPP-PEP) model to analyze pre and post fire conditions concerning precipitation, runoff, peak runoff, and sediment yield in burned areas. Entered maps, tables, and written explanation of model analysis into assessment of hydrologic impacts concerning the Diener and Bluewater fires in the Cibola NF.

#### **U.S. Forest Service**

**Forestry Technician:** Responsibilities included collecting field data for research projects related to forest and sage steppe ecology of the interior Pacific Northwest. Emphasis was placed on forest restoration, fire ecology, post-fire vegetation and fuel dynamics, and vegetation response to climatic variability. Work was conducted in the Okanogan Wenatchee National Forest.

## **ACTIONS/ACCOMPLISHMENTS:**

- Utilized the Line Point Intercept (LPI) Method to record understory vegetation type, cover, and diversity along transects and within a constructed plot. Measured and tagged trees and saplings for trend monitoring using Diameter Breast Height (DBH) tapes. Recorded characteristics such as tree and sapling health, diameter, burn severity, stand mortality, and regrowth. Identified vegetation (trees, shrubs, grasses, sedges, forbs) using a dichotomous key and entered data into a database for trend comparison.
- Conducted a Burned Area Emergency Response study designed to gauge the
  effectiveness of various seeding mixtures in disturbed environments. This involved
  using LPI to monitor native vegetation, seeded species, noxious weeds, and invasive
  species in potentially unstable areas. Establishment and proliferation of introduced
  and native species were recorded, photographed, and entered into a database for
  continued monitoring.

**Hydrologic Technician:** Installed and recorded measurements from research plots to quantify water and sediment transport from forest roads using Technical Report RMRS-GTR-287 "Measuring Water and Sediment Discharge from a Road Plot with a Settling Basin and Tipping Bucket." Utilized Technical Report RMRS-GTR-280WWW "The Geomorphic Road Analysis and Inventory Package" (GRAIP) to observe the effects of forest roads on watersheds and to improve water quality and aquatic habitat. Work was conducted in the Kootenai NF (MT), Flathead NF (MT), Boise National Forest (ID), Caribou-Targhee NF (ID), Siuslaw NF (OR), Plumas NF (CA), El Dorado NF (CA).

#### **ACTIONS/ACCOMPLISHMENTS:**

- Researched historic climate and geologic data using measurements and observations to evaluate road surfacing material, traffic level, road slope, flow-path length, rainfall intensity, soil erodibility, geology, ground water interception, road design, and road grading.
- Installed tipping buckets with flow splitters and data loggers to measure discharge
  and fine sediment accumulation. Constructed water bars and placed sediment tanks
  on forest roads to record sediment runoff. Trimble GPS and a specific data dictionary
  were used in the field to describe road-stream sediment delivery and hydrologic
  connectivity and was later imported into an ArcGIS model. Point data was taken at
  each location that water left the road and measurements (fill erosion volume, slope,
  location, contributing factors, approximate age, recent activity, grade changes) for
  gullies, landslides, or debris flows were cataloged using GPS and supported with

- photographs. Flow paths were also analyzed to identify any vegetation that could potentially mitigate further erosion and to document stream connectivity.
- Surveyed multiple stream crossings by taking photos, measuring channel width and angle, measuring culvert diameter and length, documenting culvert material and condition, and recording any woody debris or sediment plumes that could be observed in the area. Excavated stream crossings were surveyed on decommissioned roads using the same techniques but also included the use of stadia rods and an auto level to determine the elevations of various points of interest in the channel and to create a cross section profile. Side slope conditions were also documented, and Wolman pebble counts were done on the upside of the stream crossing.

**United States Marine Corps**: Served in the United States Marine Corps as an Aviation Ordnance Technician (MOS 6531) from 2006 – 2010 while stationed at Marine Corps Air Station Yuma. This involved working in a fast-paced environment with responsibilities that included operating and maintaining internal and external components pertaining to the weapons systems of the AV8-B Harrier aircraft and AH-1 Cobra helicopter. Attained the rank of Corporal and served as the night shift non-commissioned officer responsible for leading a crew of 6-10 Marines in loading evolutions that included the installation of fuses, arming wire, and explosive materials for bombs, missiles, rounds, and anti-surveillance systems while following established safety procedures.

## Other responsibilities:

- Identified and corrected deficiencies associated with aircraft through troubleshooting using testing equipment and technical publications.
- Attended supervisor meetings to establish workloads and assign personnel to complete work as necessary.
- Participated in wartime exercises with foreign military branches as well as humanitarian relief work with foreign countries in need of assistance.
- Mentored junior Marines in Military Occupational Specialty, martial arts, education, and personal growth.

## Accomplishments and Awards

- Deployed with the 11<sup>th</sup> Marine Expeditionary Unit and served in support of Operation Iraqi Freedom.
- Awards include the Marine Corps Good Conduct Medal, Global War on Terrorism Expeditionary Medal, Humanitarian Service Medal, Sea Service Deployment Ribbon, Global War on Terrorism Service Medal, National Defense Service Medal, the Rifle Expert Badge, and (2) Letters of Appreciation for volunteer work in the community.

#### **EDUCATION:**

Oregon State University

Corvallis, Oregon, United

GPA: 3.11

Attended from 2010 - 2012

GPA: 3.11

Ouarter Hours: 36

States Major: Hydrology

Boise State University Attended from 2012 - 2015

Boise, Idaho, United States GPA: 3.23 Degree: Bachelor of Science

Major: Geoscience - Hydrology Semester Hours: 96

## Emphasis **TRAINING:**

Regulations/Policy

- Regulatory I Framework and Background of USACE Regulatory Program (2016)
- Regulatory IIA Scope of Analysis, Cumulative Impacts, Administrative Appeals, Historic Properties, Tribal Issues, and Endangered Species (2017)
- Regulatory IIB Purpose and Need, Alternatives Analysis, CWA 404(b)(1)
   Guidelines, Public Interest Review and Documentation, Appeals and Mitigation (2018)
- Regulatory III Statutory Authorities, Violations, Enforcement and Compliance, Conducting Investigations, Collecting Evidence, Civil Litigation, Developing Enforceable Conditions and Mitigation Plans, Criminal Enforcement, Civil and Administrative Penalties, Administrative Resolution Strategies, and Interagency Cooperation (2022)
- Regulatory IV Conducting Wetland Delineations, Wetland Characteristics (soils, hydrology, and vegetation), Field Exercises in Recognition of Wetland Boundaries (2019)

### National Environmental Policy Act

- Introduction to NEPA USFS (2016)
- How to Build an Environmental Assessment USFS (2016)
- Applying the NEPA Process & Writing Effective NEPA Documents: DOD Specific (2017)
- Reviewing NEPA Documents (2018)
- NEPA Cumulative Analysis / NEPA Climate Change Analysis (2018)
- NEPA Process, ESA, NHPA, Documentation (2018)
- Administrative Record and Document Management (2018)
- National Environmental Policy Act for Regulators Training (2019)

## Land Management

- Interpreting Indicators of Rangeland Health BLM (2015)
- Identification of Sage Steppe and Forest Grasses University of Washington (2016)
- Managing Floodplain Development through the National Flood Insurance Program - FEMA (2017)
- Environmental Considerations in Planning (2018)
- Basic Plant Identification University of Wisconsin (2018)
- Hydric Soils Identification University of Wisconsin (2018)
- Basic Wetland Delineation Training Workshop University of Wisconsin (2018)
- Advanced Wetland Delineation Training Workshop University of Wisconsin (2018)
- Hydrologic Analysis for Ecosystem Restoration USACE (2020)

## Geographic Information Systems / Imagery Analysis

- Geomorphic Road Analysis and Inventory Package (GRAIP) USFS (2015)
- ArcGIS 1 Introduction to GIS (2017)
- Arc Hydro: GIS for Water Resources (2017)
- Hydrologic and Hydraulic Analyses Using ArcGIS (2017)
- GIS for Natural Resources Utah State University (2018)
- Field Data Collection and Management Using ArcGIS (2018)
- ArcGIS 2: Essential Workflows (2018)
- GIS Workshop for Regulators (2018)

- LiDAR Fundamentals and Data Analysis (2022)

## Design

- Channel Restoration Design I An Alternative to Channelization (2017)
- Basic Civil Engineering Culvert Design I (2017)
- Using HEC-RAS to Model Bridges, Culverts, and Floodplains University of Wisconsin (2018)
- HEC-RAS Computer Workshop ASCE (2018)
- Stream Mechanics Stream Functions Pyramid Framework (2018)
- Stream Mechanics Natural Channel Design Review Checklist (2018)
- Natural Channel Design, Stream Geomorphology Workshop Level 2 (2019)

**References:** Available on request

Announcement Number: CIN-ZX-ODH-2022-0017

Position Title: Life Scientist/General Engineer/Physical Scientist

Staging Area Number: SA-EPA-0001

Name:

MIDX: 000421899

United States Citizen: Y Veterans' Preference: NV

Military Service Dates (Start of Service - End of Service):

Location(s) Applied to: Lacey, WA(US); Portland, OR(US); Seattle, WA(US)

Series Applied To: 1301

#### Resume

Country of Citizenship: United States

Highest Grade: 13

Availability: Job Type: Permanent

Term

Multiple Appointment Types

Telework

Work Schedule: Full-time

Multiple Schedules

Work Experience: U.S. Environmental Protection Agency

01/2017 - Present

1200 Pennsylvania Ave, NW

Salary: \$124,626.00 USD Per Year

Washington DC, DC 20460 US

Hours per week: 40

Series: 1301 Pay Plan: GS Grade: 13

#### Physical Scientist

•Senior Program Manager for EPA's voluntary methane reduction programs for the oil and gas industry--Methane Challenge and Natural Gas STAR. Data Analysis, Management, and Publication: •Developed data management, analysis, documentation, and publication strategy for the Methane Challenge Program, culminating in a first-of-its-kind publication of voluntarily reported data on methane reduction efforts in the oil and gas industry at a facility level. Continue to manage the annual reporting, data analysis, and data publication process for the program. •Automate data analyses in R using Git for version control. •Lead ongoing development of standalone application within EPA's electronic Greenhouse Gas Reporting Tool (e-GGRT) for voluntary program reporting. Design and direct contractor team to develop user interface of the web application, Excel-based reporting forms, code to pre-populate forms with data reported to EPA under other programs, code to parse submitted voluntary data into a data lake, and views to export data for analysis. •Develop and document dozens of data verification checks to review industry-submitted data

before publishing on the EPA website.  $\bullet$ Serve as program technical expert on analytics and data management; leading ongoing efforts to automate and document standard analyses for transparency and consistency using R, R Markdown, Git, and JIRA/Confluence. •Analyze partner-submitted methane data, as well as program engagement metrics (e.g., web analytics), to evaluate program accomplishments and reach. •Create analyses and data visualizations to show program and company progress in reducing methane emissions for publication on the EPA website. With contractor team, develop new web 'tool' to display information on methane emission sources and mitigation options in the oil and gas industry. Involves using Qlik, EPA's Drupal system, and basic HTML/JavaScript. •Analyze geospatial coverage of program partners using ArcGIS. Program and Project Management •Regularly participate in and lead program strategic planning exercises. •Manage and track numerous ongoing projects, ensuring timely and high-quality completion of work; includes directing contractors and directing and mentoring junior EPA staff. •Regularly communicate with industry stakeholders, trade associations, and staff at other federal agencies as well as colleagues across EPA verbally and in writing. •Manage program contractor work and budget (on the order of hundreds of thousands of dollars), including preparing annual budget request for management, statements of work and independent government cost analyses for new task orders, and leading proposal evaluation panels. Presentations and Briefings: •Routinely brief senior management, up to the Assistant Administrator of the Office of Air and Radiation, on industry-reported data and program progress. Brief division and program office directors on strategic planning for addressing oil and gas methane emissions. •Represent EPA and present updates on EPA programs at EPA-led and industry-led meetings and conferences with audiences of hundreds of attendees from industry, academia, and federal/state/local governments. Oil and Gas Sector Expertise •Develop and refine library of technical information on practices and technologies to mitigate methane emissions from the oil and gas sector. Speak with industry contacts and participate in site tours at oil and gas facilities to learn how technologies are implemented in the field and to see novel mitigation practices. •Participate in cross-division oil and gas (O&G) team--stay current on other O&G activities at EPA, provide expertise on methane mitigation opportunities, develop strategic plans for greenhouse gas mitigation in the sector. •Participate in cross-program team to facilitate information sharing among natural gas transmission and distribution companies that receive, transport, and supply "renewable natural gas" (RNG) through their systems. Developed reporting protocol for companies to submit data to the Methane Challenge Program on RNG interconnects, transport, and delivery/supply.

RootMetrics 12/2016 - Present 2606 116th Ave NE Salary: \$78,659.18 USD Per Year Bellevue, WA 98004 US Hours per week: 40

Senior Data Analyst / Data Analyst

•Methodology Development: Led project to improve sampling methodology to increase spatial coverage of mobile network testing. Involved researching various sampling methods in the literature and designing and implementing multi-day experiments as well as geospatial data analysis, including creating and manipulating shapefiles and other geospatial data using QGIS, PostGIS, R, and SQL. •Data Visualization: extensive data visualization using R, Leaflet, and QGIS. •Product Development: Worked on cross-department teams to create and implement products, such as a market-level data analysis that was essential to two large contract renewals. Participated in all phases of development, from identifying a customer need to prototyping a solution, developing a methodology for the analysis, and putting the final solution into production. •Scripting: Regularly conducted analyses in R and created several R packages and scripts to automate standard analyses, using Git for version control. •Process Development: Led effort within our ~30 person department to create a centralized, comprehensive documentation system (e.g., for methodologies, processes, and database structures) using Confluence. •Data Analysis and Reporting: Using SQL, R, and LaTeX, prepared multiple customer-facing reports each week, analyzing and summarizing data

from our ongoing mobile network testing. Reports were delivered on strict deadlines dictated by our contracts.

Epic Systems Corporation 08/2014 - Present 1979 Milky Way

Salary: \$70,000.00 USD Per Year

Verona, WI 53593 US Hours per week: 40

#### Technical Services Engineer

•Software Support: Served as technical support for three hospitals using Epic's operating room (OR) software. Was responsible for investigating, tracking down the root causes of and resolving any technical issues my assigned customers encountered in the OR module of the software. Led weekly calls with IT analysts from each of my assigned hospitals to discuss ongoing issues. Also supported 'Go Lives,' working 12+ hour shifts on-site to troubleshoot technical issues as hospitals went live with the Epic software. •Reporting: Worked with customers, including IT analysts, OR managers, and surgeons, to develop operational and analytical reports and dashboards to monitor patient care, productivity, and revenue. Involved working with large sets of data using Crystal Reports and SQL queries. •Development: Cache ObjectScript coding to develop new functionality and enhancements for future releases of the Epic software. •Process Development: Led a workgroup to optimize internal processes post-installation to ensure customer success and happiness. This entailed directing a group of six staff. We created two new processes that directly addressed long-standing issues with transitioning from implementation to technical support.

Michigan Technological University 08/2013 - Present 1400 Townsend Drive

Salary: \$11,114.00 USD Student Stipend Paid

Houghton, MI 49931 US Hours per week: 20

#### Graduate Research Assistant

Conducted thesis research to validate a numerical modeling technique to characterize sheet intrusions in volcanic settings. Work involved calculating forward models to characterize surface deformations induced by synthetic magma sources and then running inverse models to attempt to characterize these sources from the deformation patterns produced. Techniques learned and used included Monte Carlo methods, neighborhood algorithms, and crossvalidation, among others. Models were run in MATLAB, in a Linux environment, using/modifying previously written scripts as well as writing my own. Initial phases of the project also involved processing and using data from InSAR images.

National Science Foundation 08/2011 - Present

4201 Wilson Blvd

Salary: \$61,204.00 USD Per Year

Arlington, VA 22230 US Hours per week: 40

Series: 1360 Pay Plan: AD Grade: 01

This a time-limited appointment or temporary promotion

#### Oceanographer

•International Scientific Program Administration: Participated in long-term international working group for the (formerly named) Integrated Ocean Drilling Program (IODP). Also

managed memoranda of understanding and membership fees for the program. •Grant Proposal Review: Facilitated merit review process for proposals submitted to NSF's Marine Geosciences Section and related programs, soliciting written reviews from subject-matter experts and organizing and running in-person review panels. •Program Development: Created strategic plan for the development of NSF cross-disciplinary programs involving the ocean sciences. •Communications and Outreach: Prepared and co-facilitated four international communications workshops for IODP. Developed and edited documents highlighting accomplishments of NSF-funded research for the NSF Director, other relevant federal entities, and the general public.

ICF International 01/2010 - Present 1725 I St

Salary: \$49,275.00 USD Per Year

10th Floor

Hours per week: 40

Washington DC, DC 20006 US

Analyst / Research Associate

Climate change and environmental chemistry consultant to the US Environmental Protection Agency (EPA) and the European Commission (EC). Worked on numerous projects; highlights follow: --Chemical Risk Assessment: For an EPA chemical approval program (the Significant New Alternatives Policy program), evaluated adequacy of data submitted by industry to the EPA and modeled and evaluated potential human and environmental exposures to chemicals submitted to the program. To support EPA rulemakings on the chemicals, prepared summary risk assessment reports and special memoranda. Coordinated all ICF project activities for this work, including toxicological and atmospheric chemistry assessments, with clients, coworkers and technical specialists (including subcontractors). Attended meetings with EPA and industry contacts. --Climate Change and Greenhouse Gas Research: • Developed greenhouse gas emission estimates, in accordance with IPCC Guidelines, for US agricultural activities and US metal production for EPA's Inventory of US Greenhouse Gas Emissions and Sinks. • For EPA, developed list of indicators of climate change and prepared draft reports on three of the indicators introducing the metric, explaining its link to climate change and presenting and analyzing relevant data. • For an EPA lifecycle analysis in support of renewable fuel related regulations, prepared estimates of potential changes in greenhouse gas emissions from agricultural sources due to various proposed changes in crop production needed to meet mandates for increased renewable fuel production.

Education: Michigan Technological University

Houghton, MI US

- 08/2013

Major: Geology

GPA: 4

Relevant Coursework, Licensures and Certifications:

Master's thesis involved geophysical inverse modeling. I completed this degree as part of an international dual masters program and spent the first year of the program in France. My thesis advisors were French professors.

Cornell University Ithaca, NY US

- 05/2007

Major: Geological Sciences

GPA: 3.39

Relevant Coursework, Licensures and Certifications:

College courses in geology, biogeochemistry, water chemistry, environmental chemistry, general chemistry, organic chemistry, marine ecology, and environmental law. Four semesters of engineering mathematics, two semesters of engineering physics and computer

programming.

Job Related Training: Basic Project Management Course (2021); Certified Contracting Officer's Representative (FAC-COR Level II) (2019 - present); EPA Lean Management System Training and Deployment (2019)

Languages: French

Spoken: Intermediate Written: Intermediate Read: Intermediate

Spanish

Spoken: Novice Written: Novice Read: Novice

Professional Publications: Menassian, Sarah J., "Validation of a 'displacement tomography' inversion method for modeling sheet intrusions", Master's Thesis, Michigan Technological University, 2013.

Additional Information: Honors and Awards: --U.S. EPA Office of Atmospheric Programs Collaboration Award (2020) --Quality Step Increase (2020) --U.S. Environmental Protection Agency National Honor Award (individual): Trudy A. Speciner Non-Supervisory Award for Advancing Environmental Protection (2018) --U.S. EPA Office of Atmospheric Programs Innovation Award (2018) --U.S. EPA Office of Atmospheric Programs "Rookie of the Year" Award (2017) --National Science Foundation Director's Award for Collaborative Integration (2011) Skills: Language: French Diploma (DELF B2) earned May 2012; spent one year of graduate school in France.

Country of Citizenship: USA

#### WORK EXPERIENCE

#### Project Manager - Senior Natural Resources Specialist

Head – Environmental Informatics Environmental Monitoring Laboratory

Broward County Environ. Protection and Community Resilience Div.

Fort Lauderdale, Florida 33314

Supervisor: Ileana Suarez-Hale (954) 519-1477 (Permission to Contact)

isuarezhale@broward.org

#### Duties and Responsibilities

Supervise field evaluations and makes recommendations on environmental aspects of
resource management; prepares restoration and management plans; supervise the review of
environmental license applications and evaluates complex project proposals for
consistency with federal, state, and local environmental laws and regulations.

Dates: 10/06/18 - Present

Hours per week: 40

Salary: \$72,000/Year

- Prepare grant request proposals for external funding; prepares technical and statistical
  reports; makes presentations to schools, civic groups, chambers of commerce, and other
  business and civic associations to publicize the environmental programs and ordinances;
  prepare informational and educational materials and programs relating to environmental
  resources; develops and implements management practices.
- Supervise and participate in the development, analysis, and review of environmental
  technical and scientific studies and designs prepared by professional consultants; prepares
  recommendations for the consideration of professional and administrative superiors and
  committees; design and participates in the design of environmental mitigation projects.
- Provide supervision, scheduling, training, and direct subordinates in monitoring and enforcing policies and procedures involving environmental protection laws and regulations; participate in policymaking decisions at middle and upper management levels.
- Direct and coordinate subordinates' training and instruction to gather, evaluate, and interpret hydrological, terrestrial, chemical, and marine physical and biological data (i.e., coastal water quality and habitat characterization).

#### Accomplishments

- Authored the 2004-2018 Water Quality Atlas for Broward County: The review and compilation of all datasets have been completed and are under final revision.
- He assisted and implemented the WIN database migration transition from STORET for the State of Florida: currently proficient in using this platform.
- Managed the Environmental Monitoring Lab website with all projects and program
  information. Updated graphs, IMaps, and data to reflect all results for each of the projects
  at the laboratory: Received a Rapid Reward for the development and completion of the
  dashboard.
- Continue to participate in the Southeast Florida Coral Reef Initiative (SEFCRI) and Technical Advisory Committee meetings to provide water quality information as requested.
- Designed and implemented programs and analyze data to produce technical documents
  that further our understanding of the environment, which are expected to include support for
  nutrient criteria, the TMDL process, and related requests for water quality data and
  assessments; finalized and launched the development of the ArcGIS Operation

- dashboard and prepared a draft for review and publication with data obtained from the algal bloom monitoring project since 2018.
- Designed and facilitated implementation and planning of the Harmful Algal Bloom Monitoring Program in the intercoastal waterways of Broward County
- Designed and facilitated the adoption of scientific products to managers, public officials, and various stakeholder groups in Broward County.
- Continue to participate in the Quarterly Water Quality sampling of the Broward County intra-coastal waterways.
- Designed and analyzed field and laboratory data for modeling and forecasting harmful
  algal bloom in intra-coastal waterways in Fort Lauderdale using machine and deep
  learning artificial geospatial intelligence (i.e., RNN and LSTM) models and used sklearn,
  TensorFlow and PyTorch libraries.

#### Accolades

- Jun 2020: Achievement Award County Resiliency: Infrastructure, Energy and Sustainability. Broward County Water Quality WebMapper (Designer of Webmapper). National Association of Counties (NACo)
- Jan 2020: Rapid Rewards: Broward County ArcGIS Water Quality & Micro (Enterococci and E.coli) Dashboards Project
- Jan 2020: Rapid Rewards: Broward County Pompano Sewage Spill Field Project

#### **TECHNICAL SKILLS**

Softwares: SEADAS; Microsoft Suite (Word; OneNote; Powerpoint; Excel including MS Access); Ocean DataView; MetaboAnalyst; CO<sub>2</sub>Calc; LabView; ArcGIS; Surfer; Grapher; Ocean Data View; SigmaPlot; SigmaStat; SPSS; Statistica; SAS; Power BI

Programming and Scripting Languages: MATLAB; MySQL; Oracle SQL; Git; Github; Java; Python; and R Cloud Computing: Microsoft Azure and AWS

Instruments Operated: LC/MS, GC/MS, UV-Vis, Scanning Fluorometer, FT-IR, C&H-NMR, Nutrient Analyzer, Elemental Analyzer, GPC, HPLC, AAS, TOC Analyzer, Turbimeter, YSI WQ Sensors, CO2 Analyzer, Titrimeter, PCR, Fluorescence Microscope, Viscometer, XPS,

#### Oak Ridge Institute for Science and Education (ORISE) Post-Doctoral Fellow

Office of Research and Development

Atlantic Ecology Lab

Dates: 09/01/16 - 09/28/18

Hours per week: 40

National Health and Environmental Effects Laboratory

Salary: \$75,500/Year

U.S. Environmental Protection Agency

27 Tarzwell Drive

Narragansett, Rhode Island 02882

Supervisor: Jason Grear, PhD (401) 782-9615 (Permission to Contact)

grear.jason@epa.gov

#### Duties and Responsibilities

- Develop and implement projects that address gaps in scientific knowledge about the drivers of phytoplankton community structure responses to changes in coastal carbonate chemistry and nutrient enhancement in Narragansett Bay
- Develop an integrated scientific and technological solution to protect human health and restore watersheds and aquatic ecosystems as part of the Safe and Sustainable Water Resources (SSWR) research program of the U.S. Environmental Protection Agency
- Implement a project to establish a relationship between nutrient-enhanced coastal acidification and hypoxia with phytoplankton community structure using bio-optical measurements, chemotaxonomy, and microscopy analyses.
- Participate in an EcoStat experiment to determine nitrogen isotope fractionation in a continuous culture system containing phytoplankton and mussel
- Participate in an experiment to determine the effect of bivalve shell characteristics after *p*CO2 exposure in a nutrient-enhanced watershed in Narragansett Bay

#### Accomplishments

- Managed and implemented projects to establish a relationship between nutrient-enhanced coastal acidification and hypoxia with phytoplankton community structure using biooptical measurements, chemotaxonomy, and microscopy analyses
- Participated in an EcoStat experiment to determine nitrogen isotope fractionation in a continuous culture system containing phytoplankton and mussel
- Performed primary productivity and carbonate chemistry analyses from EcoStat (continuous culture system) mesocosm experiment
- Participated in an experiment to determine the effect of bivalve shell characteristics after pCO2 exposure in a nutrient-enriched watershed in Narragansett Bay
- Managed and participated study involving a multi-sensor network time-series study that determined the role of nutrient-enhanced coastal acidification and hypoxia on the primary production and chemical structural changes of particulate organic matter in Narragansett
- Analyzed pCO2-exposed bivalve shell carbonate composition characteristics using Fourier Transform-Infrared Analysis
- Participated in several coastal oceanographic cruises in Narragansett Bay
- Co-authored published paper in Marine Pollution Bulletin (2020) on the nitrogen isotope fractionation in a continuous culture system containing phytoplankton and blue mussels.
- Co-authored published a paper in the Journal of Limnology and Oceanography (2020) that studied in situ recovery of bivalve shells characteristics after temporary exposure to elevated pCO2 in response to nutrient enrichment in Narragansett Bay

Dates: 01/07/13 - 06/27/16

Hours per week: 40

Salary: \$45,000/Year

Presented scientific results in a scientific conference

#### **Post-Doctoral Scholar-Employee**

**IOD- Scripps Photobiology Group** Scripps Institution of Oceanography University of California-San Diego 9500 Gilman Drive La Jolla, California 92093

Supervisor: B. Greg Mitchell, Ph.D. (858) 829-7842 (Permission to Contact)

gmitchell@ucsd.edu

#### Duties and Responsibilities

- Direct and oversee laboratory studies of microalgae and cyanobacteria growth, physiology, and acclimation of diverse growing conditions, including variations in light, temperature, nutrients, and CO2
- Perform analysis of phytoplankton pigments by HPLC and carbohydrates and lipids by GC-
- Direct analytical work for numerous biological properties of algae biomass and coordinate all data analysis
- Participate in ocean-going cruises to research bio-optical properties of seawater
- Prepare manuscripts for publication based on analysis from the laboratory and field samples
- Prepare research proposals for funding opportunities focused on algae biotechnology and the ocean biogeochemistry and bio-optical properties of the California Coastal Current
- Direct NASA-funded ecology and biogeochemistry targeted projects at SIO in the Pacific domain of the Arctic Ocean basins. Specifically, study the dynamics of bio-optically critical constituents in the Arctic Ocean waters

#### Accomplishments

- Developed machine-learning artificial intelligence models to analyze physical and chemical
  oceanographic data collected from the Arctic Ocean as part of the NASA-funded project
  Impacts of Climate on the Eco-Systems and Chemistry of the Arctic Pacific Environment
  (ICESCAPE): Bio-Optical Measurement and Modeling of the Beaufort and Chukchi Seas
  (2013-2015)
- Employed satellite, field, and lab data to estimate algal bloom and ice-melt dynamics in Beaufort and Chukchi Seas
- Characterized bio-optical properties sampled from the Antarctic Ocean using fluorescence spectroscopy and analytical, organic chemistry methodologies
- Analyzed mycrosporine-like amino acids from global samples collected during cruises by the Scripps Photobiology Group during the 15 years of global research cruises.
- Developed a microalgae biomass growth model for high-density outdoor algal ponds and raceways that simulate commercial cultivation. The model was applied to two strains of *Scenedesmus sp*. This modeling framework was able to account for significant variations in PHI (quantum yield) related to 2x changes in surface irradiance and predict biomass growth which is needed for management of commercial algae crops: Department of Energy (DOE)-funded Project: Consortium for Algal Biofuels Commercialization (CAB-COMM (2013-2015). Scripps Institution of Oceanography, University of California-San Diego
- Used bio-optical numerical models to predict algal growth in photobioreactors and raceway ponds; implemented and performed laboratory response experiments on candidate algal strain(s) by varying CO<sub>2</sub>, nutrients and light supply to measure impacts on the growth rate, photosynthetic quantum yield, and cellular concentrations of lipid, protein, carbohydrate, and pigments for candidate strain(s) during exponential and stationary growth phases
- Published scientific research findings from conducted for scientific oceanographic investigations research cruises tasked with conducting natural and physical oceanographic studies
- Prepared and published manuscripts based on analysis employing geo-spatial analytics (Artificial Neural Network: Self-Organizing Map Machine Learning Model) from data collected from multiple oceanographic scientific investigations

#### **EDUCATION**

2012: Ph.D. Marine and Atmospheric Chemistry, RSMAS-University of Miami, Florida

(2021-): M.Sc. Artificial Intelligence Engineering, Florida Atlantic University, Florida

2004: M.Sc. Marine Science, University of the Philippines-Diliman, Philippines

1999: B.Sc. Chemistry (Cum Laude), Silliman University, Philippines

2017: Professional Certification, Environmental Management (EM)

University of California-Irvine (DCE), California

 EM courses completed: Air Quality Permitting and Compliance; Assessment and Remediation of Environmental Contamination Environmental Assessment and Auditing; Clean Water Program Regulations and Management; and Legal and Regulatory Framework of Environmental Management

#### TRAININGS/ACCOMPLISHMENTS

- May 2020 (1 day): Laboratory Quality Assurance Training: Minimum Detection Limit and Calibration Training (Webinar). Florida Society of Environmental Analysts West Palm Beach, Florida
- June 2019 (2 days): Remote Sensing of Algal Communities Workshop: Harmful Algal Blooms, Assessing Spread of Invasive Species and Resource Mapping. 2019 Phycological Society Workshop Fort Lauderdale, Florida
- Jan 2018 (5 days): LC/MS Data Processing and Statistics in Metabolomics. University of California- Davis Genome Center

- July 2014 (6 days): Radiocarbon Short Course Radiocarbon in Ecology and Earth System Science, Department of Earth System Science, University of California, Irvine.
- Oct 2011 (4 days): Mass Spectrometry of Glycoproteins. Complex Carbohydrate Research Center. University of Georgia, Athens, Georgia
- Oct 2009 (2 days): Chemometrics Workshop. Federation of Analytical Chemistry and Spectroscopy Societies, Kentucky
- Dec 2006 (2 days): Thermo Fisher TSQ (LC-ESI-MS/MS) Quantum Operator's Course. Center for Marine Science and Technology, North Carolina State University. Morehead City, North Carolina
- May 2001 (3 days) Techniques for Photosynthetic Estimates in Algae. Marine Science Institute, Philippines
  - Served as the Chief Scientist that led a bio-optical oceanographic research cruise in the Gulf of Mexico as part of the Deepwater Horizon Oil Spill Research
  - Managed multiple research projects focused on water quality assessment and harmful algal bloom initiatives in SW Florida coastal waters
  - Participated in several coastal and oceanic research cruises in the SW Florida Coastal Shelf
  - Used Ocean Color to estimate Chl-a /productivity in Puerto Rico reef waters
  - Conducted oceanographic field and laboratory studies to understand harmful algal bloom (*Karenia brevis*) occurrences and biotoxin production on the SW Florida coasts
  - Participated on scientific research teams tasked with conducting natural and physical coastal oceanographic studies in SW Florida Coastal Shelf
  - Employed PARAFAC (parallel factorial analysis) supervised machine learning (a tensor (multi-way: time, space and signal components) factorization method which allows finding hidden factors for multidimensional data) in several scientific studies in the determination of marine organic carbon sources and sink, hydrocarbon (oil spill events) fingerprinting, phytoplankton group classification
  - Contributed to the development of scientific findings through publications

#### **HONORS/AWARDS**

- Dec 2015: TriNet Innovation Network Award (2<sup>nd</sup> Place). Rady School of Management/Scripps Institution of Oceanography. University of California-San Diego. <a href="https://scripps.ucsd.edu/news/fourth-annual-trinet-challenge-awards-innovation-uc-san-diego">https://scripps.ucsd.edu/news/fourth-annual-trinet-challenge-awards-innovation-uc-san-diego</a>
- Oct 2014: Young Researcher Award (FIRST PLACE). Algal Biomass Summit. Marriot, San Diego, California
- Sept 2013: Young Researcher Award (FIRST PLACE). Algal Biomass Summit. Hilton-Orlando, Orlando, Florida
- Apr 2009: Mary Roche Prize Outstanding Research at Sea & Scientific Excellence. Rosenstiel School of Marine and Atmospheric Science (RSMAS)-University of Miami
- May 2008: American Geophysical Union (AGU) Joint Assembly Outstanding Student Paper Award. AGU Spring Joint Assembly Meeting, Ft. Lauderdale, Florida
- Mar 2008: American Geophysical Union (AGU) Outstanding Student Poster Award. AGU, ASLO, TOS Ocean Sciences Meeting, Orlando, Florida, USA
- Apr 2008: University of Miami Oceans and Human Health Center (UM-OHHC) Publication Award. RSMAS-University of Miami
- 2006-2007: Rosenstiel School of Marine and Atmospheric Science Fellowship. RSMAS-University of Miami
- Dec 2009 (5 days) American Geophysical Union (AGU) Student Travel Award. AGU Fall Meeting (San Francisco)
- Sep 2008 (5 days): IFM-GEOMAR Travel Grant (Germany). Biogeochemical Interaction between the Ocean and Atmosphere (BIOCAT) Summer School, IFM-GEOMAR, Kiel, Germany. Sep 2008 (5 days).
- Oct 2008 (5 days): National Aeronautics and Space Administration (NASA) Travel Grant. AGU Chapman Conference on Organic Matter Fluorescence. University of Birmingham, Birmingham, United Kingdom

#### SELECTED SCIENTIFIC OCEANOGRAPHIC EXPEDITIONS

• Jul 2015 (7 days): California Current Cruise: M/V Oceanus Scripps Institution of Oceanography, California

- Oct 2011 (11 days): Deepwater Horizon Oil Spill Research Cruise (Gulf of Mexico): R/V Walton Smith University of Miami- RSMAS, Florida
- Feb 2011-Apr 2011 (3 months): U.S. CLIVAR and Global Ocean Carbon and Repeat Hydrography (S4P) Research Cruise (Southern Ocean/Antarctica) R/V Nathaniel Palmer University of Miami-RSMAS/Scripps Institution of Oceanography, California
- Jul 2009 (12 days); Oct 2009 (12 days); Dec 2009 (12 days): South Florida Harmful Algal Bloom Monitoring: University of Miami Oceans and Human Health Research Cruise R/V Walton Smith University of Miami-RSMAS, Florida
- Feb 2009 (2 days); June 2009 (3 days); Jun 2009 (10 days): NOAA South Florida Straits Research Cruise R/V Walton Smith NOAA-AOML, Florida
- May 2008 (10 days); April 2009 (10 days); Jun 2009 (10 days): NOAA South Florida Quarterly Hydrographic Survey R/V Walton Smith NOAA-AOML, Florida
- April 2008 (15 days): Meridional Overturning Circulation and Heat Flux Array Program (North Atlantic Ocean) R/V Seward Johnson University of Miami- RSMAS, Florida

#### **SELECTED PUBLICATIONS**

- Grear, J... et al. 2020. Growth of juvenile clams in a New England estuary after laboratory exposure to elevated pCO2. *Limnology and Oceanography* 9999: 1-15.
- Pruell,R ... et al. 2020. Nitrogen isotope fractionation in a continuous culture system containing phytoplankton and blue mussels. *Marine Pollution Bulletin* 150, 110745
- Weiss E, Schieber B, Mitchell, BG. 2017. Controls on the distribution of fluorescent dissolved organic matter during an under-ice algal bloom in the western Arctic Ocean. *Global Biogeochemical Cycles* 120: 189-204.
- Zika RG. 2014. On the temporal variation of DOM fluorescence on the southwest continental shelf of Florida. *Progress in Oceanography* 120: 189-204.
- Daniel Riemer, Zika RG. 2013. Application of fluorescence and PARAFAC to assess the vertical distribution of subsurface hydrocarbons and dispersant during the Deepwater Horizon oil spill. *Environmental Science: Processes and Impacts* 15: 1017-1030.
- Kang Y, Zika RG. 2012. Resolving DOM fluorescence fractions during a Karenia brevis bloom patch on the west Florida Shelf. *Continental Shelf Research* 32: 121-129.
- Corredor JE, Morrel J, Ko D-S, Zika RG, Mooers C.N. 2009. Developmental strategy for effective water sampling to detect possible nutrient fluxes in oligotrophic coastal reef waters in the Caribbean. *Journal of Operational Oceanography* 2:35-47.
- Mead RN, Brand LE, Shea D. 2008. Determination of brevetoxin analogs in recent marine sediments. *Chemosphere* 73: 1373-1377.
- Ganzon-Fortes ETG, Montaño MNE, 2006. First documented report in *Solieria robusta* (Greville) Kylin (Gigartinales, Rhodophyceae) in the Philippines. *Coastal Marine Science* 30(1): 238-239.
- Villanueva RD, Romero JB, Ganzon-Fortes ET, Montaño NE. 2006. Tissue age as a factor affecting carrageenan quantity and quality in farmed *Kappaphycus striatum* (Schmitz) Doty ex Silva. *Botanica Marina* 49: 57-64.
- Villanueva RD, Rodrigueza RC, Romero JB, Montaño NE. 2004. Structure and functional performance of Gigartincean kappa-iota hybrid carrageenan blends. *Food Hydrocolloids* 18: 283-294.
- MNE Montaño, EG Fortes and RD Villanueva. 2002. Chemical and gelling profile of *ice-ice* infected carrageenan from *Kappaphycus striatum* (Schmitz) Doty "sacol" strain (Solieriaceae, Gigartinaceae, Rhodophyta). *Journal of Applied Phycology* 14:409-418.

#### SELECTED RESEARCH PROPOSALS AND RESEARCH GRANTS

• 2016 - U.S. EPA Safe and Sustainable Water Resources - Nutrients Project 2, Task B (4.02B: Ecosystem Response and Recovery): Mendoza WG. Nutrient-Enhanced Coastal Acidification and Hypoxia: Impact on Phytoplankton Community Structure and Bivalve Shell Biomineralization (QAPP) / Contributing to Nutrient-enhanced Coastal Acidification and Hypoxia (NECAH), 31pp. Atlantic Ecology Division, U.S. Environmental Protection Agency, Rhode Island

- 2013 National Science Foundation (NSF) Proposal-Chemical Oceanography Division. Mendoza WG (P.I.). Physical and biological controls on the spectral characteristics of marine-and protein-fluorophores in the California Current Ecosystem; Co-PI: Greg Mitchell, Ph.D. and Lihini Aluwihare, Ph.D. Scripps Institution of Oceanography-University of California -San Diego, California. 30 pp. (Requested Amount: \$481,504.00). NSF Proposal # 1436825
- 2009 Florida Institute of Oceanography-BP. Mendoza, WG. Resolving chemical properties and extent of crude oil and dispersant distribution in the Deepwater Horizon (Amount Granted: \$250,000). Co-PI with Rod Zika, Ph.D. and Daniel Riemer, Ph.D. (University of Miami, Florida)

#### SELECTED SCIENTIFIC MEETINGS PARTICIPATED

- 2020: The Southeast Florida Regionally Unified Sea Level Rise Projection: Understanding, Applying, and Considering the context of the Third Regional Update. ZOOM Webinar, June 18, 25/July 1, 2020.
- 2019: Greater Everglades Ecosystem Restoration (GEER) Conference. Marriott Hotel, Coral Springs, FL 33076, April 22-25, 2019.
- 2019: Urban Water Quality and Association with Algal Bloom Occurrences. Green Stormwater Infrastructure Workshop, Broward Metropolitan Planning Organization, Fort Lauderdale, FL 33309, January 2019.
- 2019: Triennial Review of Water Quality Standards. Florida Department of Environmental Protection. Elsa Kimbell Environmental Education and Research Auditorium, Jonathan Dickson State Park, Hobe Sound, Florida. May 15, 2019.
- 2019: Southeast Florida Coral Reef Initiative Meeting. Fern Forest Nature Center, 201 Lyons Rd, Coconut Creek, FL 33063. June 2019.
- 2019: Broward County Surface Water Coordination Committee Meeting. Harmful Algal Bloom Technologies and Statewide Discussions. City of Pompano Beach Emergency Center. Aug 20, 2019.
- 2015: Mendoza WG, et al. Modeling *Scenedesmus dimorphus* Growth, Carbon Partitioning and Optimized Harvest Schedules for an Outdoor Raceway System. Algae Biomass Summit. Marriot Hotel-, Washington Wardman Park, Washington D.C., Sept 29-Oct 2, 2015.
- 2014: Mendoza WG, Weiss, E, Schieber B, Mitchell BG. Characterizing dynamic of biogeochemical properties in the Arctic under-ice algal bloom by using artificial neural network and principal component analysis. 2014 Ocean Sciences Meeting, Honolulu, Hawaii, Feb 23-28, 2014.
- 2014: Mendoza W, Diversity and commercial Potential of Algae. Algae Biomass Summit-Lecture and Lab Tours at Scripps Institution of Oceanography. Summer Auditorium

#### ASSOCIATION MEMBERSHIP AND CERTIFICATION

2020-2021Member, Southeast Florida Coral Reef Initiative2019-2020Member, Florida Society of Environmental Analysts

2019-2020 Member, Phycological Society of America2007-present Member, American Geophysical Union

**2008-present** Member, American Society of Limnology and Oceanography

SCUBA Certifications: NAUI Openwater; PADI Advance SCUBA Diver; PADI Rescue Diver; TDI CPR1st and CPROX Administrator; TDI NITROX

#### **EDUCATION**

Master of Environmental Science and Management - Water Resources Management Specialization (June 2016)

Bren School of Environmental Science & Management - University of California, Santa Barbara (UCSB)

Bren Hall 2400, University of California, Santa Barbara, CA 93117

**Honors**: Walton Family Foundation Sustainable Water Markets Fellowship (Full Graduate Funding)

**Involvement**: American Water Resources Association (AWRA), Environmental Justice (EJ) Forum, Student-Faculty Social Events Committee, Spanish Conversation Club (founder)

**Highlighted Coursework**: Environmental Law, Water Law, Water Policy, Geographic Information Systems (GIS), Financial Management & Accounting, Cost-Benefit Analysis, Data Analysis, Environmental Markets, Water Transactions, River Restoration, Watershed Analysis, River Systems, Earth System Science, Biogeochemistry, Business and the Environment, Economics and Environmental Policy

**Credits Earned**: 99 (Quarter System) **GPA**: 3.83 (4.00 Highest Achievable)

Bachelor of Arts - Ecology and Evolutionary Biology, Environmental Studies; Geography Minor (May 2013)

University of Colorado, Boulder (CU Boulder)

Department of Ecology and Evolutionary Biology, Boulder, CO 80309

**Leadership/Involvement**: Dorm President, Investigate Careers in the Environment Committee. Science Tutor

Highlighted Coursework: Statistics and Research Methods, Calculus 1 for Engineers, General Physics 1, General Chemistry I & II (with labs), General Biology I & II (with labs), Environmental Systems I & II (with labs), Limnology, Genetics, Principals of Ecology, Evolutionary Biology, Landscape Ecology, Ecosystem Ecology, Animal Behavior, Natural Resource Economics, Intro to Public Policy Analysis, Advanced Environmental Writing, Western US Water Resource Management, World Water, Environmental Ethics, Environmental Studies

Credits Earned: 127 (Semester System) GPA: 3.48 (4.00 Highest Achievable)

#### PROFESSIONAL WORK EXPERIENCE

PHYSICAL SCIENTIST
September 2018 - present
U.S. Environmental Protection Agency (EPA) Region 10
(Step 3) - \$93,456 USD Per Year
Water Division (WD) - NPDES Permitting Section
40 Hours Per Week

GS-12

1200 6th Ave Suite 155, Seattle, WA 98101 United States

**Supervisor**: Susan Poulsom (206-553-6258)

**Involvement:** Seattle Federal Executive Board Associates Program (2021 Graduate), WD Diversity and Outreach, WD Fun Committee, WD Water Infrastructure Response and Evaluation (WIRE) Team

#### PROGRAM & TECHNICAL PROJECT MANAGEMENT

- Implemented and administered the National Pollutant Discharge Elimination System (NPDES) General Permit for upland Aquaculture facilities in Washington State, which covers 30 tribal and federal hatcheries. In addition to regular phone calls and communications with permittees, state counterparts and federal counterparts, I regularly host tribal and federal compliance assistance meetings with over 20 attendees. Worked with contractors to draft the new general permit under changing legal circumstances.
- Implemented and administered the NPDES General Permit for Tribal net pens in Puget Sound. Drafted the new general permit, which expanded eligibility to federal net pens to accommodate the Manchester research net pen permit application. Provided mentorship to two ORISE participants through this project, with one playing a role in drafting the permit and fact sheet and another playing a role in drafting the Biological Evaluation.
- Routinely met with EPA HQ and a contractor to develop an electronic Notice of Intent (NOI) tool for administering coverage under both Washington aquaculture general permits (upland hatchery's and net pens), which were previously in paper form. These calls required constant interpretation of permit requirements and deadlines, and the development of new processes and workflows. Reviewed and approved electronic NOIs as they came in from 5 net pen facilities and 30 upland hatchery facilities, in many cases denying and requesting further information. Great attention to detail is necessary for these reviews, where requests for further information lead to clearer diagrams and information to support our permit development, to help facilities manage facility turnover and to support EPA inspectors.
- Drafted Chief Joseph Dam NPDES permit, a high-profile project covering 43 outfalls, under evolving legal circumstances in accordance with the Clean Water Act. This project required a detailed understanding of dam operations and associated environmental impacts and risks. Supported work on other dam permits, particularly in regard to approaches to toxics monitoring and best management practices, which involved convening support from EPA's Manchester Lab chemists and from the Regional PCB Coordinator.
- Drafted and issued Tensed, ID wastewater treatment plant NPDES permit. Detailed site visit to Tensed as well as two other wastewater treatment plants on tribal land.
- As the Water Quality Trading (WQT) programmatic specialist for the NPDES section, I
  engage in periodic discussions with state counterparts on water quality trading issues in
  Oregon, Washington and Idaho, and review draft permits with WQT components. This
  has included regular biweekly meetings over a series of months with Oregon DEQ on
  their implementation of WQT, and briefings to management on WQT issues.

- Organized complex lists of Columbia and Snake River NPDES dischargers from Washington, Oregon and Idaho for the development of the Columbia and Snake River Temperature Total Maximum Daily Load (TMDL) in accordance with the Clean Water Act. For this project, I gathered the best information available on design flow and maximum temperature, and coordinated closely with counterparts in Washington and Oregon to reach agreement, research discrepancies and finalize the list. With this final list I conducted mass balance temperature loading analyses with support from technical staff, and worked with the regional water quality modeler to organize them for inclusion in the overall temperature analysis.
- Coordinated externally with USFWS, USFDA and other federal agencies and internally
  with other EPA programs in an effort to resolve confusion around the use of diquat at
  tribal hatcheries in Washington, and to understand the greater regulatory framework
  around INADs. Similarly worked with the Army Corps of Engineers, NOAA and the
  Columbia River Intertribal Fish Commission (CRITF) on emerging needs and issues
  related to fish anesthetic discharges at federal dam fish ladders. Provided updates on
  these issues at NPDES Branch Chiefs National Calls and drafted briefing papers for
  senior management.
- Play a leading support role in managing NPDES ELMS responsibilities managing huddles, permit issuance data charts, the permit flow board, and supporting management in gathering permit issuance data when needed.

#### **COMMUNICATION & OUTREACH**

- Presented complex technical and legal material to public audiences on three occasions on the subject of EPA's Columbia River Cold Water Refuges Project. In addition to my presentations, I fielded external inquiries and comments from the public and built valuable partnerships with partner organizations during networking breaks that have benefited the project.
- Staffed an outreach booth for a STEM event at a local middle school, where I demonstrated a physical watershed model to adults and children, using Kool Aid and Hot Chocolate Powder as 'pollution' to explain the impacts of pollution in watersheds and how that relates to rivers, fish and Orca Whales.
- Managed the outreach mailing list for the Columbia River Temperature Total Maximum Daily Load (TMDL), where the public was directed to my contact information on our website.
- Represented the Combined Federal Campaign (CFC) for my division as our key worker, where I presented at office gatherings, answered questions and encouraged participation through various engaging email 'asks' and in person with individuals.

#### **INSPECTIONS & FIELD WORK**

- Keta Creek and Clear Creek Hatchery Inspection Accompanied compliance and enforcement staff on inspections of tribal aquaculture facilities, where I helped explain permit conditions to the facility staff, and supported them in subsequent planning for facility expansion.
- Elliott Bay Net Pens site visit to support permit development

- Chief Joseph Dam site visit to support permit development
- Tensed, Plummer and St. Maries wastewater treatment plant site visit to support permit development
- Columbia River Cold Water Refuges Field Trip Visit tributary confluences along the Columbia River Gorge to observe fish use and estimate physical environmental parameters – 2017, 2018

#### **ORISE PARTICIPANT**

April 2017 - September 2018

U.S. Environmental Protection Agency (EPA) Region 10

\$54,804 USD Per Year

Water Division (WD) - Watershed Section and Drinking Water Section

40 Hours Per Week

1200 6th Ave Suite 155, Seattle, WA 98101 United States

Supervisor: David Croxton (206-553-6694)

\*Spent 6 months in the Watershed Unit, then in October 2017 began working 40% in the Drinking Water Unit.

#### PROGRAM & TECHNICAL PROJECT MANAGEMENT

- Conducted interviews with 16 Grants Reporting and Tracking System (GRTS) database users and CWA Non-Point Source Pollution (NPS) managers about challenges with troubleshooting and entering data, as well as strategies for applying NPS data more widely in decision-making. I summarized the interview data into a series of program management recommendations and presented at two regional database trainings (Boise, ID & Harrisburg, PA). I also presented my findings at the national level to the EPA Headquarters Nonpoint Source Control Branch Chief. This project influenced management to deploy a new communication plan a listsery to support information sharing and troubleshooting amongst state and EPA database users throughout the country.
- Routinely met, engaged and brain-stormed with a regional collaborative workgroup on water temperature issues. Working with colleagues and managers, we strategized on approaches to address parallel multi-stakeholder temperature projects with underlying legal, scientific and political uncertainty. For this workgroup, I built a complex decision chart to assist in the group's collaborative problem solving and in the managers' decision-making.
- Through my routine involvement with three major work efforts the Columbia River Cold Water Refuges Project, the Columbia and Snake River dam NPDES permits, and the Columbia River Basin Temperature Total Maximum Daily Load (TMDL) development - I have worked collaboratively with the technical, policy and outreach leads on navigating project timelines, outreach, collaboration, talking points, workshops and briefings. Through these experiences, I am confident navigating project management charts and timelines, and utilizing other tools and approaches to balancing and managing parallel work efforts.
- Conducted an extensive analysis of the Safe Drinking Water Information System (SDWIS) database, comparing it with over 150 complex Water Quality Monitoring Plans

(WQMP) and identifying technical discrepancies. I presented my analysis to the Indian Health Service (IHS) regional leadership and EPA management. This informed decision-making around how tribal drinking water monitoring schedules and sample site information are communicated to tribal water system operators.

- Co-developed a communication plan and workflow to include tribal schools in a
  Washington Department of Health campaign to test for lead in elementary schools.
  Executing the plan included extensive telephone outreach and communication with
  tribal water system operators and school management. I also drafted letters to send to
  tribal leadership.
- Led the summary and analysis of state and tribal temperature water quality standards for the Columbia River Basin Temperature TMDL. I worked closely for 3 months with the states of Washington, Oregon and Idaho as well as the Colville and Spokane Tribes. The resulting deliverable included legal citations, two maps communicating legal and scientific information, and a detailed regulatory stringency analysis. I have presented this work product in external meetings, and it has been shared with Columbia Basin states, tribes and other federal agencies to be used for multiple regional projects.
- Conducted a 5-Year TMDL review for a large reservoir in Idaho. I provided written comments, via a memorandum, to the Idaho Department of Environmental Quality (IDEQ). My detailed comments provided feedback on the state's data analysis, as well as potential causes to observed pollution trends.
- Engaged in regular monthly discussions on a national workgroup focused on legal, social and economic solutions for using water quality trading (WQT) as a tool to reduce pollution. These meetings involve representatives from headquarters as well as each EPA region.
- Assist in the Direct Implementation of the SDWA regulations on tribal land. This required an understanding of the regulations, and the ability to clearly communicate with tribal water system operators, other partners and stakeholders.
- Experience navigating the Office of Water and Watersheds (OWW) High Density file room. I efficiently conducted research on historical drinking water monitoring results. I also reviewed memorandums about policy interpretations and water system engineering information. This led to the development of drinking water sampling schedules and informed correspondence with tribal water system operators.
- Compiled, analyzed and summarized extensive hourly temperature data from
  throughout the Columbia River Basin in Washington. I evaluated the environmental data
  against temperature water quality standards to determine whether designated uses are
  being protected. This data analysis project relied heavily upon my understanding of
  complex river processes and physical characteristics. I applied knowledge of
  geomorphology, technical principals and problem solving to guide the analysis and
  presentation of information. I presented my findings at large state and federal policy
  meetings, as well as to managers at EPA, including the Director of the Water Division.
- Led the development of a watershed restoration snapshot for the Columbia River Cold Water Refuges Project. I conducted research on the watershed's geology, climate and

history and interpreted the results of environmental models and field observations to develop funding priorities and project recommendations.

#### **GEOSPATIAL ANALYSIS**

- Used ArcGIS to develop three detailed maps displaying the location of temperature water quality standards limits and impairments. The maps will be used in technical reports, fact sheets, websites and oral and written briefings for the Columbia River Basin TMDL.
- Working collaboratively with a cross-program team to develop a GIS tool to inform
  permit quality reviews and to guide future nutrient priorities with Region 10 states. I
  accessed and manipulated nutrient related GRTS data through Oracle Business
  Intelligence (OBI) software to feed into this project.
- Conducted a geospatial analysis overlaying tribal community water system wells with sites potentially contaminated with per- and poly-fluoroalkyl substances (PFAS). I created a map of these sites with a buffer zone for safety. This map was used to inform management of available monitoring locations to ensure safe drinking water.

#### **COMMUNICATION & OUTREACH**

- Assisted in preparing for and implementing the Columbia River Cold Water Refuges
   Public Workshop, working to connect with stakeholders and others to share information,
   gather and compile feedback, and develop partnerships and connections.
- Managed planning and logistics for an in-person regional GRTS training in Boise, ID.
   Organized a data entry training webinar for Region 10 states.
- I have spent time on tribal reservations throughout Washington, meeting with utility operators and tribal representatives about water system management and source water assessment. My drinking water projects involved extensive outreach and communication with the many tribal water system operators and natural resource representatives throughout the region, involving comprehensive administrative navigation and tracking of communications.

#### **INSPECTIONS & FIELD WORK**

- Boise, ID Restoration Tour Tour of NPS projects, discussion with state and county government staff – 2017
- Columbia River Cold Water Refuges Field Trip Visit tributary confluences along the Columbia River Gorge to observe fish use and estimate physical environmental parameters – 2017
- Drinking Water Sanitary Survey Inspections Assist IHS staff in six sanitary surveys on reservations throughout Washington, spending one to two days in the field inspecting groundwater wells, water treatment houses, water storage tanks, and distribution sampling sites for any significant deficiencies from SDWA regulations – 2017, 2018

LEGAL RESEARCH ASSISTANT November 2016 - March 2017 Western Water Futures LLC. \$2,000 USD Per Month

10212 Belgrove Ct. NW, Seattle, WA 98177 United States 25 Hours Per Week

Supervisor: Steven Malloch (206-818-0482)

- Conducted research on state, county and city level legislative and zoning approaches to managing water supply availability in the context of land use planning.
- Compiled and summarized key research findings into a legal report to be used as training material for state legislators to quickly navigate the pros and cons of legislative solutions to water management issues.
- This work involved little oversight, where much of my work was focused, independent research and deliverable development, with a phone call once a week to update my manager on my progress and findings.

PROJECT MANAGER March 2015 - May 2016

Masters Group Project Thesis - University of California Santa Barbara

Received Graduate School Credit Bren Hall, 2400 University of California, Santa Barbara, CA 93117 16 Hours Per Week

**Supervisor**: Dr. Gary Libecap (805-893-8611)

**Project Clients**: Daugherty Water for Food Institute and Mammoth Trading

#### PROGRAM & PROJECT MANAGEMENT

- Co-wrote a project proposal with project clients for a year long, five-student collaborative professional and research project titled, "Factors Influencing the Expansion of Environmental Water Markets." The project was selected by the Group Project Selection Committee, and I was selected by my peers to serve as the project manager for the year.
- Managed project direction, deadlines, and deliverables, keeping an array of information organized and clear in a group database.
- Managed internal communication and group dynamic within my 5-person project team, and managed external communication with our clients, our external advisor, our faculty advisor, and our 50+ interviewees from across the western US. This involved writing communication plans, having challenging conversations with peers and faculty, and managing expectations among many groups.
- Project deliverable was a document to be used as training material for new environmental water market practitioners to understand the multilayered process of engaging in environmental water transactions.
- Managed a \$10,000 project budget, used by the group to travel to meetings, conduct a month long research road trip, and print posters and materials.

- Analyzed financial water market information from across the western US, using the Bren Water Transactions Database to compare transactions between different entities.
- Provided clients with strategic recommendations for lowering transactions costs and expanding the impact of environmental water markets, based on interview findings and data analysis.
- Researched state-level legislative enabling conditions for environmental water transactions, compiling information for five states and summarizing in the final report.
- Reviewed public memorandums, contracts, approval forms and budgets regarding environmental water transactions.

#### COMMUNICATION & OUTREACH

- Conducted in-person interviews with 25 water market practitioners, relevant government officials, farmers, scientists, environmental groups, city managers, academics and irrigation district managers. I developed a rapport with the interviewees, allowing me to uncover the root issues of expanding environmental water markets. I analyzed over 50 interview transcripts collected by the team and organized them into themes and categories. This informed our final deliverable. Many of these interviews were conducted during a 4,000-mile research road trip throughout the western US, where we spent time touring farm infrastructure, learning about water management and discussing water efficiency with farmers, government staff and other stakeholders.
- Presented the project findings as an academic thesis defense, and also as a presentation geared towards the public, with an outreach poster and project fact sheet.

## DAMS & GROUNDWATER RESEARCH ASSISTANT 2015 - February 2016

January

**Dr. Gary Libecap - University of California Santa Barbara** \$900 USD Per Month

Bren Hall 4412, Santa Barbara, CA 93106 United States
10 Hours Per Week

Supervisor: Dr. Gary Libecap (805-893-8611)

- Supported ten economists and law professors from throughout the University of California system in their Multicampus Research Programs and Initiatives research regarding the potential for environmental markets in California.
- Supported four multidisciplinary professors in their Strategic Environmental Research Initiatives research on dams. I examined economics, political science and natural science angles. I formed and organized research agendas, and I organized outside speakers.
- Organized extensive logistics leading up to two in-person research meetings with 20+ attendees from throughout California, working independently to build research meeting agendas and balance different research priorities.

- Responsible for managing the group database, ensuring the geographically dispersed group could all access and track progress on the updated versions of group research documents and datasets.
- Compiled budgeting information between many academic grants to plan for catering, hotels, and other details leading up to the research meetings.
- Collected technical, legal and economic data regarding the Sustainable Groundwater Management Act. I presented this information at large research meetings, answering questions and facilitating productive communication and understanding amongst an interdisciplinary team of researchers.

#### WATER MARKETS RESEARCH INTERN 2015 - September 2015

July

American Rivers - Rivers of the Puget Sound and Columbia Basin

\$5000

USD Student Stipend from UCSB 209 E 18th Ave, #22, Ellensburg, WA 98926 United States 40 Hours Per Week

**Supervisor**: Michael Garrity (360-902-8113)

- Interviewed 13 stakeholders throughout the Yakima Basin about the water market components of the Yakima Plan, engaging in detailed discussions about water transactions, agricultural economics, irrigation districts, dams, snowpack and climate change.
- Responsible for scheduling and traveling to interviews across the state, writing independently with little oversight to conduct my research and prepare my deliverable.
- Analyzed interviews, and reviewed publications and data. I compiled this into a written report focused on the opportunities for expanding water markets in the Yakima Basin.

**OUTREACH INTERN January 2013 - May 2013** 

Keep it Clean Partnership - City of Boulder

Received College Credit 4049 N. 75th Street Boulder, CO 80301 United States 10 Hours Per Week

**Supervisor**: Steve Noud (303-441-1439)

- Demonstrated physical watershed model in outreach booths at community events throughout Boulder County.
- Discussed watershed health and nonpoint source (NPS) pollution at community events with children, while holding higher level conversations with parents, sometimes in Spanish.
- Encouraged participation and buy-in of community members by encouraging them to take the Water Pledge, identifying what they can do in their daily lives to conserve water and reduce pollution.

- Prepared and organized classroom materials.
- Processed and analyzed Water Pledge engagement data.

#### **ECOLOGICAL RESEARCH ASSISTANT**

\*May 2011 - August 2012

#### Dr. Matt Wilkins - University of Colorado Boulder

(\*Intermittent - 7 months working)

Ecology and Evolutionary Biology Dept., Boulder, CO 80309 United States Grant Funding ~ \$700 USD Per Month

20 Hours Per Week

Supervisor: Dr. Matt Wilkins (256-655-6826)

- Conducted a playback experiment on barn swallows on private land throughout Boulder County, carefully tracking and logging their behavioral responses to different playback calls.
- Captured barn swallows in nets and took biological samples, including breast feather samples, tail feather samples and blood samples. I marked birds with leg bands and colored their tail feathers for identification.
- I conducted daily nest checks at a series of sites, and kept track of all collected data by logging it into an excel database everyday.

#### **GRANTS RECEIVED**

CU Boulder Undergraduate Research Opportunities Program (UROP) Grant, Summer 2012 CU Boulder Bioscience Undergraduate Research Skills and Training Program (BURST) Grant, Summer 2011

#### **AOUATIC RESEARCH ASSISTANT**

June 2011 - October 2011

#### Center for Limnology - University of Colorado Boulder

Received College Internship Credit 216 UCB, University of Colorado Boulder campus, Boulder, CO 80309 20 Hours Per Week

**Supervisor**: Thomas Detmer (217-728-4851)

- Conducted aquatic sampling and data gathering at high elevation lakes to understand the influence of trout introduction into high elevation lakes. I wore a dry suit, inflated the one-man raft, and independently collected an array of aquatic samples in the middle of the lake. The sampling included measurements of depth and secchi depth, a spectrum of vertical profile samples of zooplankton, surface water samples of phytoplankton, periphyton samples, riparian vegetation samples, and occasionally a live fish sample.
- Assisted in processing samples in the lab, using heating and centrifuging methods. I also helped with the identification and counting of zooplankton to understand community dynamics and vertical stratification.

#### **ASSISTANT WILDERNESS EDUCATION COUSELOR**

2008 - August 2008

Wilderness Awareness Camps - Teens in Public Service (TIPS)

\$1290 USD Per Month

2900 NE Blakeley St. Suite B, Seattle, WA 98105

40 Hours Per Week

**Supervisor**: Maddie Cohen (this is the current TIPS contact, not my supervisor) (206-985-4647)

• Guided educational games and taught children aged 3-14 about wilderness and the natural world.

#### **PROFESSIONAL DEVELOPMENT & TRAINING**

- Facilitation Training 8 Hours 2019
- Permit Writers Training 40 Hour 2019
- DiSC Workplace Training September 2019
- DiSC Training 2018
- 2018 National Training Workshop for Clean Water Act 303(d) Listings & TMDL Staff –
   2018
- Structuring Effective Meetings Training 8 Hour 2018
- Columbia Gorge Fisheries and Watershed Science Conference 2018
- Northwest Modelers Workshop (NWMOD) 2018
- Tribal Ecological Knowledge Training 2018
- Cold Water Refuges Public Workshop 2018
- Hazardous Waste Operations and Emergency Response (HAZWOPER) Training 24 Hour – 2017
- Grants Reporting and Tracking System (GRTS) Database Training 2017
- National EPA Clean Water Act 303(d) Coordinators Meeting 2017
- Bren School Water Transactions Workshop 2014, 2015, 2016, 2017
- American Water Resources Association Washington Section Annual Conference 2016, 2017
- Barefoot Thinking Group Leadership Training for Scientists 24 Hour 2016
- River Rally 2016
- Panelist at California Water Policy Conference
  - -Market-Based Approaches to Water Management Claremont McKenna, CA 2015
  - -Market Approaches to Achieving Water Related Environmental Outcomes Davis,

#### CA - 2016

- Granite Construction San Clemente Dam Removal Tour 2015 (before), 2016 (after)
- American Water Resources Association National Conference: Water for Urban Areas
   2015
- The Seminar Group Washington Water Transactions CLE 2015
- Metropolitan Water District Tunnels and Dam Infrastructure Tour 2015
- Where the US and Australia Meet on Drought Solutions 2014

#### **COMPUTER & TECHNICAL ANALYSIS SKILLS**

**Microsoft Office Suite:** Word, PowerPoint, Excel; Access, Outlook, SharePoint, OneDrive

May

Geospatial Analysis: ArcGIS, BASINS

Statistical Analysis: R Studio

Database Use and Support: EPA Grants Reporting and Tracking System (GRTS); EPA

Safe Drinking Water Information System (SDWIS); Northwest Stream Temperature

(NorWeST); Integrated Compliance Information System (ICIS);

#### **ARTICLES & PUBLICATIONS**

#### **Water for Instream Flows**

The Water Report #148 - June 2016

## Visiting Scholars get Crash Course in Nebraska Water Management, Instream Flow Issues

Water for Food Blog - Daugherty Water for Food Institute - August 2015

#### **LANGUAGE**

**English** - fluent

Spanish - speak, read and write at low level

#### **AWARDS & HONORS**

#### EPA Region 10 Peer Award November 2017

 Award for contributing to the preparation and execution of a successful public workshop in Portland, OR regarding the Columbia River Cold Water Refuges Project

## Walton Family Foundation Sustainable Water Markets Fellowship September 2014 - June 2016

 Full graduate funding and supplementary economic and applied curriculum, professional development and field trips focused on market approaches to environmental management, and other creative, collaborative approaches to environmental problem solving.

#### **REFERENCES**

#### **Professional Reference**

Name: Susan Poulsom

**Employer:** US EPA Region 10 - Water Division

Title: NPDES Section Manager

Phone: 206-553-6258

**Email:** Poulsom.Susan@epa.gov

#### **Professional Reference**

Name: Jenny Wu

Employer: US EPA Region 10 - Water Division

Title: NPDES Permit Writer

Phone: 206-553-6328

Email: Wu.Jennifer@epa.gov

#### **Professional Reference**

Name: John Palmer

**Employer:** US EPA Region 10 - Water Division

**Title:** Senior Policy Advisor **Phone**: 206-553-6521

**Email:** Palmer.John@epa.gov

#### **Professional Reference**

Name: Ben Cope

**Employer:** US EPA Region 10 - Office of Environmental Review and Assessment

(OERA)

**Title:** Senior Water Quality Modeler

**Phone**: (206) 553-1442 **Email:** Cope.Ben@epa.gov